

F.No.1(14)-SMART/BOI/23
PRIME MINISTER'S OFFICE
BOARD OF INVESTMENT
SMART PROJECT

**TENDER DOCUMENT FOR PROCUREMENT OF
EQUIPMENT & MACHINERY**



**SECTORAL MAPPING AND REGULATORY TRANSFORMATION
(SMART)**

307, 3rd Floor, Evacuee Trust Complex
Islamabad

Tel: 051-9218801

F.No.1(14)-SMART/BOI/23
Prime Minister's Office
Board of Investment
(SMART Project)
3rd Floor, Evacuee Trust Complex, F-5/1, Islamabad

TENDER NOTICE

Sealed tenders are invited from the reputed firms having registration with the Sales Tax and Income Tax Department for Supply/provision of following items. Detailed specifications are available in tender documents: -

Sr. No.	Equipment	Qty
Equipment & Machinery		
1.	Desktop PC	03
2.	Laptop	24
3.	Printers (B&W)	06
4.	Printers (Color)	01
5.	Multimedia Projector and Screen	01
6.	Fax	02
7.	Photocopier (B&W)	01
8.	LED TV 50"	02
9.	Scanners	06
10.	Video Conference Equipment and Zoom Business	01
11.	Public Address System	01
12.	Networking and Network Switches	5 & 80 Nodes
13.	Wireless Routers with Controller	5
14.	Firewall	01
15.	Server Machine	01
16.	Microsoft 365 Business	27
17.	DSLR Camera with Lens	01
18.	Security Cameras with 1 NVR having 8TB HDD	16
19.	UPS	01
20.	Biometric Attendance Machine	01
21.	Centralized Air Condition System	01

Note: It will be responsibility of successful bidder to install, fix (as per requirement) & provide necessary logistics for transportation of goods.

2. The list of items to be procured is available in the detailed Tender Document and can be obtained from this office during office hours on any working day. Tender bids should reach the undersigned latest by _____ before 1400 hrs which would be opened on the same day at 1430 hrs. Bid Security @ 5% of the total bid value should necessarily be attached with the bid.

3. Interested vendors are requested to submit their rates/tenders, which should be valid till Six Months i.e. _____.

- i. Income tax and other government taxes will be deducted at source as per rules.
- ii. Tender Notice can be downloaded from <https://invest.gov.pk> and PPRA i.e. <https://www.ppra.org.pk>,
- iii. GST and vendor number should be clearly written on the tender documents. The tenders without GST and Vendor number will not be entertained.
- iv. Tender documents for each category may be obtained, free of cost from the undersigned's office during office hours (08:30 AM to 04:30 PM).
- v. No tender will be accepted without Bid Security of the quoted bid in the form of bank draft or pay order in favor of **Deputy Director (Admin) SMART, Islamabad**. Cheques will not be accepted in any case. The bids without Bid Security will be rejected at the spot.
- vi. The firms who quote the lowest rates will have no right to take back the Bid Security or to reduce the

- same or to withdraw from the tender. Rates should be quoted in Pak Rupees. Price should not be linked with dollar or any other currency.
- vii. The tenders will be evaluated in the light of PPRA Rules 2004 and instructions issued from PPRA from time to time.
 - viii. Tenders will be opened by the Procurement Committee in the presence of the bidders or representatives of the firms who may like to attend at the given time and place.
 - ix. The tenders received after the deadline date and time will not be entertained in any case.
 - x. The procurement will be made from time to time as per requirement.
 - xi. The Procuring Agency reserves the right to accept or reject the whole tender or a portion of the tender as per PPRA Rules 2004.
 - xii. Blacklisted firms are not eligible to participate in the bidding process.

(Sarmad Usman)
Deputy Director (Admin)
Tel#: 051-9218801

Mr Sarmad Usman
Deputy Director (ADMIN/SMART)
Wednesday, 05 June, 2024, 10:4:46 AM

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1. Invitation to Bid

1.1 PPRA Rules to be followed:

Public Procurement Rules, 2004 will be strictly followed. These may be obtained from PPRA's website: <https://www.ppra.org.pk/>

In this document, unless otherwise mentioned to the contrary, "Rule" means a Rule under the Public Procurement Rules, 2004.

1.2 Mode of Advertisement(s)

As per Rule 12, this Tender is being placed online, at the websites of the Board of Investment i.e., <https://invest.gov.pk> and PPRA i.e., <https://www.ppra.org.pk>, and published in two daily newspapers.

1.3 Type of Open Competitive Bidding

As per Rule 36(b), Single Stage - Two Envelope, (Most Advantageous Bid) Procedure shall be followed. Initially only "Technical Bid" shall be opened in the **BOI's Conference Room, Office No. 405, 4th Floor, Evacuee Trust Complex, Islamabad** (on the date and time prefixed in this document) in the presence of bidders or their authorized representatives, who may choose to be present. The envelope marked as "Financial Bid" shall be retained in the custody of the procuring agency without being opened. The Procuring Agency shall first establish the "Eligibility" and then evaluate the "Technical Bid" confirming the compliance of the offered item's technical specifications to the demanded ones. The "Financial Bid" of eligible and technically qualified bidders shall be opened publicly at a time, date, and venue to be announced and communicated to the bidders.

2. Bidding Details (Instructions to Bidders)

All bids must be accompanied by Bid Security equivalent to **five (5%)** of the total bid price in shape of pay order/bank draft, as part of financial bid in favor of **Deputy Director Admin (SMART) Islamabad**. The complete bids are to be submitted as per requirement under this tender document in BOI office not later than **1400 hrs** on last date of submission of bids i.e. _____ late bids shall not be considered.

A prospective bidder requiring any clarification(s) on the Bidding Documents may notify the Procuring Agency in writing at the Procuring Agency's address indicated in this document. The Procuring Agency shall respond in writing to any request for which clarification(s) are sought. Written Copies of the Procuring Agency's response shall be sent to all prospective bidders through post, e-mail, or fax and shall be binding on them.

TERMS AND CONDITIONS OF THE TENDER (INSTRUCTIONS TO BIDDERS)

3. Tender Scope

- 3.1 The SMART Project, Board of Investment, (hereinafter referred to as "the Purchaser") invites Proposals (hereinafter referred to as "the Tenders") for the supply of **Equipment & Machinery** (hereinafter referred to as "the Goods") and for installation and after-sale support of the said goods (hereinafter referred to as "the Services").
- 3.2 The equipment will be delivered at the Islamabad office of the Purchaser (Office # 307, 3rd Floor, Evacuee Trust Complex, F-5/1, Islamabad)

4. Instructions to Bidders

- 4.1 The bidders have registered/incorporated company/firm in Pakistan with relevant business experience; and must be involved in sales or supply business of Equipment & Machinery.
- 4.2 Must be registered with Tax Authorities as per prevailing latest tax rules (Only those companies which are validly registered with sales tax and income tax departments and have sound financial strength can participate);
- 4.3 Has valid Registration of General Sales Tax (GST) & National Tax Number (NTN) and must be included in the Active Taxpayers List (ATL) of FBR (Documentary proof is required).
- 4.4 The bidders must certify that:

- The item quoted is of the latest and current production model and bears the manufacturing batch/serial number within the last six months of the date of quotation.

4.5 Has not been blacklisted by any Provincial or Federal Government Department, Agency, Organization or Autonomous Body, or Private Sector Organization anywhere in Pakistan. (Submission of undertaking on legal stamp paper is mandatory).

4.6 Has the required relevant qualified personnel and enough strength to fulfill the requirement of the assignment.

4.7 Has offices at Rawalpindi and/or Islamabad.

4.8 The Procuring Agency reserves the right to increase or decrease the quantity in accordance with the PPRA Rules, 2004 as amended from time to time. The bidder must not indicate directly or indirectly their financial bid anywhere in the technical bid. Any such disclosure shall result in the rejection of the bid. Conditional or incomplete bid(s) shall be rejected.

5. **Tender Cost**

The Tenderer shall bear all costs/expenses associated with the preparation and submission of the Tender(s) and the Purchaser shall in no case be responsible for those expenses.

6. **Amendment of the Tender Document**

The Purchase / Evaluation Committee of the SMART Project of Board of Investment may, at its exclusive discretion, amend the Tender Document to extend the deadline for the submission of the Tender as per Rule-27 of Public Procurement Rules, 2004.

7. **Preparation / Submission of Tender**

7.1 The Tender shall be filed in/accompanied by the prescribed Forms, Annexes, Schedules, Charts, Drawings, Documents, Brochures, Literature, etc. which shall be typed, completely filled in, stamped and signed by the Tenderer. If the volume of the bid contains various set(s) of documents, the same must be properly numbered and tagged in binding shape.

7.2 The Bidding Document shall contain the Name of the Focal person along with valid address, telephone, fax, and email of the firm:

7.3 Detail specifications are available at **Annexure-A**

7.4 Technical Proposal Form (**Annexure-E**)

7.4.1 Covering letter duly signed and stamped by authorized representative. (**Annexure-B**)

7.4.2 Evidence of eligibility of the Tenderer and the Goods and Evidence of Conformity of the Goods / the Services to the Tender Document.

7.4.3 Undertaking and evidence that the quoted Goods are genuine, brand new, non-refurbished, un-altered in any way, of the most recent/current model, imported through proper channel, and incorporate all recent improvements in design and materials.

7.4.4 Technical Brochures/Literature, and details of Warranty and After-Sale Service.

7.4.5 The technical specifications of the goods, different from the required specifications shall be straightaway rejected.

7.5 The Financial Proposal shall comprise the following:

7.5.1 Financial Proposal Form (**Annexure-F**).

7.5.2 Price Schedule / Bill of Quantity (**Annexure-F-1**).

7.5.3 Financial Capacity (**Annexure-F-2**).

7.5.4 5% Bid Security of the total tender price.

7.6 The Tenderer shall seal the Original Technical Proposal in an envelope duly marked as under:
Original Technical Tender for "**Equipment & Machinery**" with reference to tender no.

[Name of the Tenderer]

[Address of the Tenderer] [Phone & Cell No. with the focal person of the Tenderer]

7.7 The Tenderer shall again seal the sealed envelopes of the Original Technical Proposal and the Original Financial Proposal in an outer envelope, duly marking the envelope as under:

Original Technical Tender for "**Equipment & Machinery**" with reference to tender no.

Deputy Director Admin SMART Project
Prime Minister's Office, Board of Investment,
3rd Floor, Evacuee Trust Complex, Agha Khan Road,
Islamabad

[Name of the Tenderer]

[Address of the Tenderer] [Phone No. of the Tenderer]

8. This is made obligatory to affix authorized signatures with an official seal on all original documents, annexures, copies, certificates, brochures, literature, drawings, letters, forms, and all relevant documents as part of the bids submitted by the tenderer.

9. Tender Price

- 9.1 The quoted price for each model / item / product shall be in Pak Rupees only inclusive of all taxes and will be valid up to _____ or till completion of Warranty Period in case of the successful bidder.

10. Opening of the Tender

- 10.1 The Tenders (Technical Bids only) shall be publicly opened in the **BOI's Conference Room, Office No. 405, 4th Floor, Evacuee Trust Complex, Islamabad** by the Purchase / Evaluation Committee at **1430 hrs** on _____, in the presence of the Tenderer(s) for which they shall ensure their presence without further invitation. In case the last date of bid submission falls on/within the official holidays/weekends of the Purchaser, the last date for submission of the bids shall be the next working day.

11. QUALIFICATION CRITERIA

11.1 Technical Evaluation:

In continuation of instructions to bidders mentioned at Serial No.4, preliminary screening of bids for further assessment will be done on the basis of following parameters: -

Sr. No	Document	Requirement
1	NTN Certificate.	Mandatory
2	GST Certificate.	Mandatory
3	Active Taxpayers Status as per FBR ATL.	Mandatory
4	Registration/Incorporation/Business Certificate and number of business years in Pakistan.	Mandatory
5	Complete Company profile.	Mandatory
6	The bidder should be a company/firm having operational office in Islamabad/Rawalpindi.	Mandatory
7	Affidavit on legal paper to the effect that not blacklisted and rendered ineligible for corrupt and fraudulent practices by any Government (Federal, Provincial, or Local) or a public sector organization/Division/ Ministry.	Mandatory
8	Submission of required amount of bid security with Financial Bid (A confirmation to this effect in Technical Bid is must).	Mandatory
9	Compliance with Technical Specifications & scope of work (Yes/No).	Mandatory
10	Original Bidding Documents duly signed/stamped.	Mandatory
11	One year warranty certificate on letterhead regarding quality, durability of items / services with free replacement of all defective / disordered items within the warranty period.	Mandatory

11.2 Procedure for evaluation of bids:

- Detailed Technical Evaluation will be done for firms / bidders who qualify the preliminary screening criterion mentioned above.
- In Detailed Technical Evaluation, the Purchase / Evaluation Committee shall evaluate the technical specifications on criteria as following:

Sr. No.	Criteria	Marks	Points	
1	Compliance with Specifications	10	Non - compliance	0
			Full - compliance	10
2	Product Quality	15	Low	5
			Medium	10
			High	15
			5-6 Weeks (Maximum)	5

3			3-4 weeks	10
			1-2 weeks	15
4	After-sale Service	10	1 year (minimum)	5
			More than 1 year	10
5	Number of Clients	15	10 clients (minimum)	5
			11 to 20	10
			21 or more	15
6	Financial Statement (Annual Turnover)	10	Up to 5 million	5
			More than 5 million	10
7	No. of Technical Staff	10	3 – 5 persons	5
			More than 5 persons	10
8	Experience	15	Up to 3 years	5
			Up to 5 years	10
			Up to 7 years or more	15

iii. The technical evaluation criteria along with selection formula will be the following:

$$\begin{aligned}
 \text{Technical Evaluation Marks} &= 75 \\
 \text{Financial Marks} &= 25 \\
 \text{Financial Evaluation Marks} &= (\text{Lowest bid in item quoted} / \text{quoted bid in item quoted}) \times 25 \\
 \text{Total Marks} &= \text{Technical Evaluation Marks} + \text{Financial Evaluation Marks}
 \end{aligned}$$

iv. The bidders will be asked to present samples for evaluation of quality by the committee.

v. After evaluation, the Purchase / Evaluation Committee shall declare bids of firms / vendors technically responsive / non-responsive (Bidders who score less than 60% out of 75 marks in the above-mentioned criteria will be rejected and its sealed / unopened Financial Proposal shall be returned)

vi. Bids that pass technical evaluation will be opened for financial evaluation.

11.3 Financial Evaluation:

11.4 The Financial Proposals will be opened in the **BOI's Conference Room, Office No. 405, 4th Floor, Evacuee Trust Complex, Islamabad** in the presence of the Bidders or their authorized representatives.

11.5 The evaluation will be carried out item-wise and the bid found to be the **Most Advantageous Bid** shall be accepted against each item.

11.6 In cases of discrepancy between the cost/price quoted in Words and Figures, the lower of the two will be considered.

11.7 The purchaser will not be responsible for any erroneous calculation of tax rates or any subsequent changes in rates or structure of applicable taxes. All differences arising out as above shall be fully borne by the Successful Bidder. If there is no mention of taxes, the offered/quoted price shall be considered as inclusive of all prevailing taxes/duties. The bidder shall be responsible for all new taxes.

12. Inspection and Tests

i. After delivery of goods at the Purchaser's premises, the Purchaser shall inspect the quantity, quality, and specifications of goods.

ii. The Inspection Committee of the SMART Project, Board of Investment will carry out a detailed physical examination of stocks and can reject, any item, if found not according to the approved technical specifications & quoted by the bidder. Moreover, the Supplier will also be responsible for replacing the same without any further charges within one week time.

Packing

Packing & accessories: All the items to be provided in proper company packing and will be opened in the presence of Tender Evaluation Committee and thereafter installed along-with trainings at the designated locations of procuring agency by the technical resources provided by supplier.

13. Transportation and delivery requirements

- i. The bidder shall deliver the supplies at the destination in scratch-less condition with all the manufacturer supplied accessories.
- ii. All costs associated with the transportation including loading/unloading and road taxes shall be borne by the Supplier.

14. Rejection of the Bid The procuring agency may reject all bids or proposals at any time prior to the acceptance of a bid or proposal. The procuring agency shall upon request communicate to any supplier who submitted a bid or proposal, the grounds for its rejection of all bids or proposals but is not required to justify those grounds.

15. Performance Security (Annexure-D)

15.1 The Successful Bidder shall furnish a Performance Guarantee @10% of the total cost. The bid security of the successful bidder(s) shall be returned upon successful delivery of goods, and furnishing of the Performance Security. If the successful bidder fails to fulfill the obligations or violates any of the terms and conditions of the Tender Document, the earnest money shall be forfeited. In such an event, the Procuring Agency may award the Supply/Purchase Order to the next lowest evaluated bidder or call for a new bid.

16. Execution Schedule / Delivery

The successful Supplier shall deliver ordered Goods/ equipment within the stipulated time: a maximum of six (06) weeks from the issuance of the Purchase Order. During project implementation and the warranty period, the Supplier shall provide maintenance, required software, supply, and procurement support necessary to maintain all system reliability levels. The Supplier shall arrange and pay for the transport of the Goods to the place of destination.

Penalties for late deliveries of supplies: The hardware supplies shall be delivered in accordance with the Purchase Order to be issued by the SMART Project, Board of Investment. In case of late deliveries, penalties at the following rates will be applied:

Mode of Penalty	100% Quantity as per Purchase Order	Total Delivery Period
Without Penalty	As per Purchase Order (Quoted Time in the Bid not exceeding maximum period i.e. 06 weeks)	As per Purchase Order
With Penalty @ 1% per day after expiry of time period as stipulated in the Purchase Order or maximum period i.e. 06 weeks whichever applicable up to maximum of 10% of the total price.	10 days	-

ANNEXURE-A

01.	<u>Desktop PC</u> 11th Gen Intel® Core i7 Processor, 8GB DDR4 RAM, 1 TB SSD Drive, Intel Chipset, LAN Integrated 10/100/1000M Gigabit Ethernet Controller or equivalent, Keyboard, Mouse, and Power cords, 18.5-inch Display LED or higher with at least 1-year local warranty and windows 11 licensed version	03
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02.	<u>Laptops</u> 13th Gen Intel Core i7 Processor 8GB DDR4 RAM, 1-TB SSD Drive (M2) 15.6 screen size, Full HD, Intel Chipset, LAN Integrated 10/100/1000M Gigabit Ethernet Controller or equivalent with genuine good quality bag and at least 1 year local warranty and windows 11 licensed version	24
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03.	<u>Printers (B&W)</u> Up to 40 ppm (default); Up to 42 ppm (HP high speed mode), Up to 1,200 x 1,200 dpi, 300 dpi, 600 dpi, HP FastRes 1200, HP ProRes 1200, Monthly duty cycle: Up to 100,000 pages, Processor speed: 800 MHz, Memory: 1 GB, Media Sizes: Tray 1: 3 x 5 to 8.5 x 14 in; Tray 2: 4.1 x 5.8 to 8.5 x 14 in; Optional Tray 3: 4.1 x 5.8 to 8.5 x 14 in.	06
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04.	<u>Printer (Color)</u> Functions: Print, copy, scan, fax, email Up to 35 ppm (Color and B&W), 600x600 dpi, Up to 38,400 x 600 enhance dpi (Color and B&W), 4 cartridges (1 each black, cyan, magenta, yellow), 2 GB available hard drive space, Internet connection or USB port, 512 MB NAND Flash, 512 MB DRAM, Windows 11; Windows 10; Windows 8; Windows 8.1; Windows 7; Windows Client OS; Android; iOS; Mobile OS; macOS 10.12	01
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<u>5. Multimedia Projector & Screen</u>	LCD Laser Projectors	
LCD Panel	Size	16.3 mm (0.64 in) diagonal (16:10 aspect ratio)
	Display System	Transparent LCD panel x 3, R/G/B
	Drive Method	Active matrix
	Pixels	2,304,000 (1920 x 1200) pixels
Light source	Laser diode	
Light output	7,000 lm	
Time until light output declines to 50%	20,000 hours (NORMAL/OUIET)/ 24,000 hours (ECO)	
Resolution	WUXGA (1920 x 1200 pixels)	
Contrast ratio	3,000,000:1 (Full On/Full Off) (When [PICTURE MODE] is set to [DYNAMIC] and [DYNAMIC CONTRAST] is set to [1].)	
Screen size (diagonal)	0.76-7.62 m (30-300 in), 16:10 aspect ratio	
Center-to-corner zone ratio	85%	

Lens	1.6x manual zoom (throw ratio: 1.09-1.77:1), manual focus lens, F 1.60-2.12, f 15.30-24.64 mm	
Lens shift (from center of screen)	Vertical	+44 %, 0 % (manual)
	Horizontal	+20 %, -20 % (manual)
Keystone correction range	Vertical: +25°, Horizontal: +35°	
Installation	Ceiling/floor, front/rear, free 360-degree installation	
Terminals	HDMI IN	HDMI 19-pin x 2 (Compatible with HDCP, Deep Color, 4K/30p*4 signal input) CEC Supported)
	COMPUTER1 IN	D-sub- 15-pin (female) x 1 (RGB/YPBPR/YCBCR)
	COMPUTER 2 IN	D-sub- 15-pin (female) x 1 (RGB/YPBPR/YCBCR)
	AUDIO 1/2 IN	M3 stereo mini-Jack X 2
	VARIABLE AUDIO OUT	M3 stereo mini-Jack X 1
	SERIAL IN	D-sub 9-pin (female) x 1 for computer control (RS-232C compliant)
	DIGITAL LINK/LAN	RJ-45 x 1 for network and DIGITAL LINK connection (video/network/serial control) (HDBaseT™ compliant), 100Base-TX (Compatible with PLink™ [Class2] HDCP, Deep Color, 4K/30p*4 signal input)
	LAN	RJ-45 x 1 for network control, 10Base-T, 100Base-TX, compatible with PLink™ [Class 2]
	USB (VIEWER/WIRELESS/DC OUT)	USB connector (Type A) x 1 for Memory Viewer function, optional Wireless Module AJ-WM50 Series, power supply (DC 5 V, maximum 2 A*5)
Power Supply	AC 100 V-240 V, 50/60 Hz	
Power consumption (TBD)	420 W	
Built-in speaker	10 W monaural	
Cabinet materials	Molded plastic	
Filter*6	Included (Estimated maintenance time: approx. 20,000 hours)	
Operation noise*1	39 dB (NORMAL/ECO), 29 dB (QUIET)	
Dimensions (W x H x D)	399 mm x 115 mm x 348 mm (15 23/32" x 4 17/32" x 13 11/16") (not including protruding) 399mm x 133 mm x 348 mm (15 23/32" x 5 1/4" x 13 11/16") With feet at shortest position)	
Weight with supplied lens*7	Approx. 7.2 kg (15.87 lbs)	

Operating environment	Operating temperature: 0-45°C (32-113 °F) ^{*8*9} Operating humidity: 20-80 % (no condensation)	
Applicable software	Multi Monitoring & Control Software, Logo Transfer Software, Presenter Light Software for Windows® 10, Wireless Projector App for iOS/Android™*11	
<p>With Projection Screen 6x8 16:9 aspect Ratio, 150" wall mount Electric motorized with Remote Fine Fabric Lucky for wide screen</p> <p>HDMI cable 30 Meter 2.0, VGA cable 30 Meter, Power cable 20 Meter, Ceiling Stand 4 Feet, Projector Installation</p>		

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6. FAX (Qty : 2)	
Printing method:	Laser printing on plain paper
Effective scanning width:	208 mm
Effective printing width:	202 mm (A4), 208 mm (Letter / Legal)
Resolution:	600 dpi. Standard / Fine / Photo / Super Fine / Mixed
Paper size:	A4 / Letter / Legal
Modem speed:	33.6 kbps
Transmission speed:	Approx.4 sec/page*2 in ECM-MMR mode
Compression system:	MH / MR / MMR
Document memory:	2.5 MB (Reception: 100 pages / Transmission: 150 pages) *2
Integrated Telephone	
Dial mode:	Tone (DTMF) / Pulse
Manual answer:	TEL, TEL / FAX
General	
Power Consumption:	Standby: 2 W, Copy: 240 W, Maximum: 950 W (fuser lamp turns on)
Power Supply:	AC 220 – 240 V, 50/60 Hz

07.	<p><u>Photocopier</u> Copy Process Indirect Electrostatic Photographic Method/OPC/Laser Printing/Heat Roller Fusing Display 10.1' Color WVGA Touch Screen Tilting Display Copy Speed 50 PPM (LT) First Copy Out 7.8 Seconds Color/5.9 Seconds B&W Warm-Up Time Approx. 20 Seconds Copy Resolution 600 x 600 dpi</p>	01
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Stack Feed Bypass 3.9' x 5.8' to 12" x 18", 12" x 47" Banner, Envelope
Multiple Copying Up to 999 Copies
Paper Capacity Standard 1,200 Sheets/Max. 3,200 Sheets Original Feed
Optional 300-Sheet DSDF or 100-Sheet RADF
Scan Speed & Weights DSDF Scan: Up to 240 IPM Duplex,
120 IPM Simplex (Monochrome or Color), Simplex: 9.3-110 lb
Bond, Duplex: 9.3-110 lb Bond
RADF Scan: 73 IPM (Monochrome or Color): Simplex: 9.3-41.8 lb
Bond, Duplex: 13.3-41.8 lb Bond
CPU Intel Atom 1.33GHz (Dual-Core)
Memory 4GB, Hard Disk Drive 320GB Self-Encrypting Drive FIPS 140-2
Validated

E-BRIDGE NEXT PRINT SPECIFICATIONS

PDL PCL5e, PCL5c, PCL6 (PCL XL), PS3, PDF, XPS, JPEG
Print Speed 25 Pages Per Minute (LT)
Print Resolution 600 x 600 dpi (1 bit) or 2,400 x 600 dpi (with
Smoothing), 1,200 x 1,200 dpi (2 bit) or 3,600 x 1,200 dpi (with
Smoothing) PS3 Only
Operating Systems Windows Vista, Windows Server 2008/R2,
Windows 7, 8, 8.1, 10, Windows Server 2012/R2, Macintosh (Mac
OS < 10.4, 10.5, 10.6, 10.7, 10.8, 10.9, 10.10, 10.11), Unix, Linux
Network Protocols TCP/IP (IPv4, IPv6), NetBIOS over TCPIIP, IPX/SPX for
Novell Environments, Ether Talk for Macintosh Environments
Printing Protocols SMB, LPR/LPD, IPP (Ver.1.1)
w/Authentication, AppleTalk PAP or Ether Talk TM, Port 9100 (bi-
directional), NetWare P-SERVER LPD w/ iPrint, WS Print, FTP Print Drivers
Windows® Vista SP2 (32-bit, 64-bit), Windows Server 2008 SP2
(32-bit, 64-bit), Windows Server 2008 R2 SP1 (64-bit), Windows 7
SP1 (32-bit, 64-bit), Windows 8/8.1 (32-bit, 64-bit), Windows Server 2012R2
(64-bit), Windows 10 (32-bit, 64-bit), Mac OS X 10.6.8, 10.7.4, 10.8,
10.9, 10.10
Interface RJ-45 Ethernet (10/100/1000 Base-T), USB 2.0 (High-speed),
Optional 802.11b/g/n, Wireless LAN, Optional Bluetooth
Wireless Device AirPrint, Mopria, e-BRIDGE Print & Capture Application on
iOS and Android (Available via Apple App Store or Google Play)
Device Management TopAccess, EFMS 6.2 (e-BRIDGE Fleet Management
Software)

SCAN SPECIFICATIONS

Scan Speed DSDF Scan: Up to 240 IPM Duplex, 120 IPM Simplex
(Monochrome or Color), RADF Scan: Up to 73 IPM (Monochrome or Color)
Scan Modes Standard: Full Color, Auto Color, Monochrome, Grayscale
Scan Resolution 600 dpi, 400 dpi, 300 dpi, 200 dpi, 150 dpi, 100 dpi
File Formats Monochrome: TIFF-Multi/Single Page, PDF- Multi/Single Page,
Searchable PDF (Opt.), XPS-Multi/Single Page, DOCX (Opt.), XLSX (Opt.),
PPTX (Opt.) Color/Grayscale: JPEG, TIFF-Multi/Single Page, PDF-
Multi/Single Page, Slim PDF, Searchable PDF (Opt.), XPS-Multi/Single Page,
DOCX (Opt.), XLSX (Opt.), PPTX (Opt.)
Image Compression Color/Grayscale: JPEG (High, Middle, Low)

FAX SPECIFICATIONS

Compatibility Super G3

	Data Compression MH/MR/MMR/JBIG Transmission Speed Approx. 3 Seconds Per Page Fax Modem Speed Up to 33.6 Kbps Memory Transmission 100 Jobs (with HDD), 2,000 Destinations Max. 400 Destinations /Job Scan Speed 0.7 Seconds Per Page, Maximum 73 IPM	
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08.	<u>LED TV 50" or higher</u> 4K Smart LED TV with dynamic crystal color and HDR with 3 HDMI and 2 USB Ports. Resolution = 3,840 x 2,160	02
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09.	<u>Scanners</u> Speed: 25 ipm Black & white, Color & Gray Scale Straight Path, High Speed USB 3.2, Network & Wi-Fi Maximum Scanning Resolution: up to 600 dpi ADF Capacity: 50 sheets or Above Daily Volume: 4000 or above Other Features: Auto Color Detection, Auto Page Size Detection, Double-Feed Detection, Use OEM: UK, USA, JAPAN or Any other European country	06
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10.	<p>Video Conference Equipment with Zoom Business License</p> <p>Camera</p> <ul style="list-style-type: none"> • Smooth motorized pan, tilt and zoom controlled from remote or console • Pan +/- 90° • Tilt +35° / -45 • 10x lossless HD zoom • Field of View <ul style="list-style-type: none"> • Diagonal: 90° • Horizontal: 82.1° • Vertical: 52.2° • Ultra HD 4K H264 AVC, H264 High Profile, H265, Voice Control camera with zoom business license • H.264 UVC 1.5 with Scalable Video Coding (SVC) • Autofocus • 5 camera presets • Far-end control (PTZ) of Conference Cam product (with supported services) • Kensington security slot • Video mute/unmute LED indicator • Standard tripod thread Remote Control <p>Remote Control</p> <ul style="list-style-type: none"> • Camera, speakerphone, and call control • 5 camera presets • Docks on speakerphone • IR 28 foot (8.5 m) range • CR2032 battery (included) <p>SPEAKERPHONE</p> <ul style="list-style-type: none"> • Full-duplex performance 	01
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	<ul style="list-style-type: none"> • Acoustic echo cancellation • Noise reduction technology • Ultra-wideband audio • Pairs with mobile devices via Bluetooth and NFC • LCD for caller ID, call duration and other functional response • LEDs for speakerphone streaming, mute, hold, and Bluetooth • Tactile buttons for call answer/end, volume and mute, Bluetooth, and Camera controls • 5 camera presets for pan, tilt, and zoom settings • Kensington security slot <p>Microphones</p> <ul style="list-style-type: none"> • Pickup Range: 19.69 ft (6 m) • Pickup range with expansionmixs:27.89 ft (8.5 m) • Four omnidirectional, beamforming microphones • Frequency response: 100Hz - 11KHz • Sensitivity: -28 dB +/-3dB • Distortion: <5% from 200Hz <p>HUB I CABLES / POWER</p> <ul style="list-style-type: none"> • Central Hub connects and powers all components • Under-table mounting adhesive included • One cable to camera: 5 m (16.4 ft) • One cable to speakerphone: 5 m (16.4 ft) • Extended cables available: 32.81 and 49.22ft (10and 15m) • One USB cable for connection to PC/Mac: 7 ft (2 m) • AC Power adapter with regional plugs • Power cable: 9.84 ft (3 m) <p>MOUNT</p> <ul style="list-style-type: none"> • Dual-purpose bracket works for both wall mounting and tabletop elevation <p>With Zoom Business Licenses</p>	
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11.	<p><u>Public Address System (01 system)</u></p> <p>Control Unit having MP3 recording and DAFS, also provides power for the Discussion Devices. It supplies DC power to all connected Discussion Devices and monitors and controls the discussion system.</p> <p>Discussion Devices 24 “long-neck mic with delegate units with control unit, amplifier, ceiling speakers & wiring. short-stem fixed microphone, configurable as a delegate device or chairperson's device. Discussion Devices to be connected in a daisy-chain configuration to the Control Unit. Their plug-and-play functionality should allow them to be conveniently connected to and removed from the system as required. Length of microphone from mounting surface: 18 inches (Long neck)</p> <p>Amplifier: 4 microphone/line inputs, plus 3 music source inputs 100 V and telephone input with priority & VOX. Announcement only output, 3-wire volume override. Voice- activated emergency override. Wide range of power :60 Watt</p> <p>Ceiling Loud Speakers: 6 Watt</p>	12+1 (Speaker units + Chairman Unit)
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<p>Cables terminated at both ends with a molded six-pole circular connector (male and female). 20 Meters</p> <p>40x76 Speaker Cable: Audio Cable for Speakers 90 Mtrs Length</p> <p>30 Watt Cabinet Loud Speakers: High-fidelity music and speech reproduction Selectable 8 ohm, 70 V and 100 V inputs Compact yet robust ABS enclosure Supplied with adjustable mounting bracket Water and dust protected IP65</p>	
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12. Network Switches and Networking

Sr.#	Description	Qty	LOT
Core Switch Layer 3			
1	24 Port Layer 3 switch with all accessories Installation and Configuration	1	
Access Switch Layer 2			
2	48 Port 10/100/1000 switch with all accessories, Installation and configuration	4	
SFP			
3	Single Mode 1G SFP	8	
Rack			
4	42 U Rack with PDU and allied accessories	1	
Passive Part			
5	Passive Networking	80 Nodes	

Sr. No.	Core Switch Layer 3 (Requirement)	Compliance
1	The switch must be equipped with 24 x SFP ports	
2	The switch must be equipped with 4 x 10/100/1000BaseT Combo ports	
3	The switch must be equipped with 4 x SFP+ ports	
4	The switch should work using a modular operating system with the ability to restart an Individual process without a full reset switch.	
5	The switch bandwidth must be not less than 128 Gbps	
6	The maximum number of stored MAC addresses in the switching table the switch shall be not less than 16000	
7	The routing table of the switch must store not less 48D IPv4 routes	
8	The switch must support 256 or more Multicast groups	

9	The switch must support stacking with other familie9 of switches from the same manufacturer and stack bandwidth must be not less than 40Gbps in ring topology through 10 Gigabit Ethernet ports.	
10	The failure of any switch in the stack should not cause stack outage more than 50ms.	
11	The switch must support the joint failover configuration with another identical switch to connected devices can use the mechanism for combining multiple physical channels (LAG) to two switches with active simultaneous use of all channels; the recovery Time in case of any link failure between switches should not exceed 50ms.	
12	The failover configuration must be supported for two separate switches and two separate stacks of switches.	
13	The switch must support the IEEE family protocols: 802.3: 802.3, 802.3ae, 802.3ab, 802.3z.	
14	The switch must support 802.1ad Q-in-Q) and Selective Q-in-Q protocols	
15	The switch mush support High Availability Network Protocols with 50ms recovery time in ring topology with RFC 3619 Ethernet Automatic Protection Switching.	
16	The switch must support ITU-T G.8032 Ethernet Ring Protocol Switching	
17	The switch must support 802.1w, 802.1s, PVST+ protocols	
18	The switch must support 802.1AS, 802.1Qav, 802.1Qat, 802.1BA	
19	The switch must support Policy-based Routing	
20	The switch must support IEEE 802.1x protocol	
21	The switch should support intrusion detection mechanism, prevent the spread of worms and viruses, suppression of attacks such as DoS.	
22	The switch must support sFlow version 5.	
23	The switch must support the scripting language (scripting) that run directly on the switch. The scripting language should support common comand language Python.	
24	The switch must support the XML language for a simple embedding procedure for the management switch into external systems	
25	The switch must support the change of configuration parameters upon the occurrence of events such as authentication devices, authenticating users, the offensive certain time, the establishment and breakage of connection on a port and all other events, which detects by the operating system of the switch.	
26	The switch must support ITU-T Y.1731 protocol	
27	The switch support Cloud Management System	
28	Then switch must support following routing protocols:	
28.a	OSPF	

28.b	RIP v1/v2, PIM,	
29	The switch must support BFD for static routing and dynamic routing protocols OSPFv2/OSPFv3	
30	VMAN Customer Edge Port CVID Egress Filtering / CVID Translation	
31	LAG (802.3ad LACP) core, between switches	
32	VLAN aggregation	
33	Ethernet Audio Video Bridging (AVB) support	

Sr. No.	Access Switch Layer 2 (Requirement)	Compliance
1	The switch must be equipped with 4 x 10/100/1000BaseT ports	
2	The switch must be equipped with SFP ports, not less than 8 (2+6 combo)	
3	The switch must be equipped with SFP+ ports, not less than 4	
4	The switch should work using a modular operating system with the ability to restart an individual process without a full reset switch.	
5	The switch bandwidth must be not less than 176 Gbps	
6	The maximum number of stored MAC addresses in the switching table the switch should be not less than 16000	
7	The routing table of the switch must store not less 480 IPv4 routes	
8	The switch must support 256 or more Multicast groups	
9	The switch must support stacking with other families of switches from the same manufacturer and stack bandwidth must be not less than 40Gbps in ring topology through 10 Gigabit Ethernet ports	
10	The failure of any switch in the stack should not cause stack outage more than 50ms.	
11	The switch must support the joint failover configuration with another identical switch to connected devices can use the mechanism for combining multiple physical channels (LAG) to two switches with active simultaneous use of all channels; the recovery Time in case of any link failure between switches should not exceed 50ms.	
12	The failover configuration must be supported for two separate switches and two separate stacks of switches	
13	The switch must support the IEEE family protocols: 802.3: 802.3, 802.3ae, 802.3ab, 802.3z.	
14	The switch must support 802.1ad Q-in-Q) and Selective Q-in-Q protocols	
15	The switch must support High Availability Network Protocols with 50ms recovery time in ring topology with RFC 3619 Ethernet Automatic Protection Switching.	

16	The switch must support ITU-T G.8032 Ethernet Ring Protocol Switching	
17	The switch must support 802.1w, 802.1s, PVST+ protocols	
18	The switch must support 802.1AS, 802.1Qav, 802.1Qat, 802.1BA	
19	The switch must support Policy-based Routing	
20	The switch must support IEEE 802.1x protocol	
21	The switch should support intrusion detection mechanism, prevent the spread of worms and viruses, suppression of attacks such as DoS.	
22	The switch must support sFlow version 5.	
23	The switch must support the scripting language (scripting) that run directly on the switch. The scripting language should support common command language Python.	
24	The switch must support the XML language for a simple embedding procedure for the management switch into external systems	
25	The switch must support the change of configuration parameters upon the occurrence of events such as authentication devices, authenticating users, the offensive certain time, the establishment and breakage of connection on a port and all other events, which detects by the operating system of the switch.	
26	The switch must support ITU-T Y.1731 protocol	
27	The switch support Cloud Management System	
28	Ethernet Audio Video Bridging (AVB) support	

Passive Part (Requirements)

Passive work including ducting, copper/ fiber laying, termination and fluke testing.

- I. Giga Cable UTP CAT6
- ii. CAT 6 Patch Panel
- iii. CAT6 I/O
- iv. Faceplate Single / dual Shutter
- v. Patch Cords CAT 6, (1 & 3 meter)
- vi. Fiber Backbone Cable for Uplink the network switches.
- vii. Optical Distribution Frame.
- viii. Dura Duct, Pipe and Accessories
- ix. Switch cabinet

Sr. No.	Requirement	Compliance
1	CAT 6 Cable	
1.1	Cat 6 Cable, UTP, PVC, 4 pairs, 305 meter /Box Gigabit original copper cable Category 6 U/UTP Cable (with cross-shaped separator) offer the possibility to deploy	
1.2	Unshielded Category 6/Class E systems when installed with Cat-6 RJ45 Jacks.	

1.3	<ul style="list-style-type: none"> Conductor Diameter: AWG 24 (B 0.525 +/- 0.015mm) 	
1.4	<ul style="list-style-type: none"> Insulation Diameter: PE 0 0.95 +/- 0.05 mm 	
1.5	<ul style="list-style-type: none"> Cable assemblies: pairs 	
1.6	<ul style="list-style-type: none"> Sheath material: PVC 	
1.7	Mechanical Features:	
1.7a	Maximum cable diameter (mm) 5.4D +/- 0.30	
1.7b	Bending Radius (mm)	
1.7c	Dynamic (installation) / Static (installed) $\geq 8x$ outer diameter / $\geq 4x$ outer diameter	
1.7d	Temperature Range In service / Installation, Transport and Storage -20°C +60°C / 0°C +50°C	
1.8	Electrical Features at 20°C:	
1.8a	DC Resistance max 9.38 Ω /100m	
1.8b	Resistance Unbalance ≤ 2 %	
1.8c	Insulation Resistance (500 V) ≥ 5000 M Ω /km	
1.8d	Mutual capacitance nom. 5.1 nf / 100 m at 1kHz	
1.8e	Test Voltage (DC, 1 min) 1 kV / 1m	
1.8f	Capacitance Unbalance (pair to ground) max. 160 pf / 100 m at 1kHz	
1.8g	VPN (nominal) 67%	
1.9	Standards Cables	
1.9a	IEC 61156-5 ed. 2	
1.9b	ANSI/TIA 568-C.2	
1.9c	ISO/IEC11801 ed.2	
1.10	Fire Rating	
1.10a	LSZH: IEC 60332-1	
1.10b	PVC: IEC 60332-1	
2	CAT6 I/O	
2.1	RJ45 K6 Jack, Cat 6, UTP, Shuttered (tool-less termination),	
2.2	Category 6/Class E system, fully compliant with Category 6 ISO/IEC, EN and TIA standards	
2.3	For hardware performance, confirmed by independent laboratory certifications (Delta, GHMT).	
2.4	The jacks have the following features:	
2.4a	<ul style="list-style-type: none"> Category 6 UTP 	

2.4b	<ul style="list-style-type: none"> Keystone fixing; 	
2.4c	<ul style="list-style-type: none"> Tool less assembly (mandatory) 	
2.4d	<ul style="list-style-type: none"> Capable of being wired to both 568B and 568A 	
2.4e	<ul style="list-style-type: none"> three cable entry points 	
2.4f	<ul style="list-style-type: none"> Integral shutter/shuttered jack 	
2.4g	<ul style="list-style-type: none"> Jacks must be reusable i.e. it must support multiple termination. 	
2.5	Applications	
2.5a	- IEEE 802.3 1GBASE-T	
2.5b	- PoE - IEEE 802.3at	
2.6	Standards	
2.6a	- ISO/ IEC 11801 Edition 2, Am 1-2	
2.6b	- ISO/ IEC 60603-7-5	
2.6c	- EN 50173-1	
2.6d	- ANSII TIA/ EIA-568-C.2-2009	
2.6e	- IEC 60512-99-001	
3	Faceplate	
3.1	single non-shuttered	
3.2	U.K. Single Gang Faceplate, 1 port, w/o shutter.	
3.3	8s x 86 faceplate range can be loaded with Cat-6 UTP I/O to provide the following configurations:	
3.3a	<ul style="list-style-type: none"> Single gang, 1 port 	
3.3b	<ul style="list-style-type: none"> Single gang, 2 ports 	
3.4	Specifications	
3.4a	Faceplates - size (h x w x d) 10mm Single gang - 86 x 86 x 10mm	
3.4b	Material V0 - ABS	
4	Optical Distribution Frame	
4.1	along with supporting accessories	
5	Rack mount with sliding tray pre-loaded with SC Duplex couplers	
6	Fluke Testing of Copper Nodes & OTDR testing of fiber links.	
7	Dura Duct	
7.1	Duct, Pipe and accessories 16x25mm, 16x38mm, 40x40mm, 60x60, 1inch pipe etc.- with Adamjee or equivalent ducting and flexible PVC pipe fiber termination unit/ODF	

13. Wireless Controller (Qty = 01)

Maximum remote AP licenses = 16, Maximum concurrent users/devices = 1,024, Maximum VLANs = 4,096, Active firewall sessions = 64k, Concurrent GRE tunnels = 256, Concurrent IPsec sessions = 1,024, Concurrent SSL sessions = 1,024, Firewall throughput (Gbps) = 4, Wired Bridged throughput (Gbps) = 4, Encrypted throughput 3DES (Gbps) = 1.2, Encrypted throughput AES- CBC-256 (Gbps) = 1.3, Encrypted throughput AES-CCM (Gbps) = 2.0, Encrypted throughput AES- GCM-256 (Gbps) = 1.7, Form factor/footprint = Desktop/fanless, 10/100/1000BASE-T = 8, USB 2.0 = 2, Console port = RJ-45, Max concurrent of PoE Ports = 8, Max2 concurrent PoE+ Ports = 100W

13.1 Wireless Access Points (Qty = 04)

Wi-Fi Radio Specifications

- AP type: Indoor, dual radio, 5GHz and 2.4GHz 802.11ax 4x4 MIMO
- 5GHz radio: Four spatial stream Single User (SU) MIMO for up to 2.4Gbps
- Wireless data rate with individual 4SS HE80 (or 2SS HE160) 802.11ax client devices, or with four 1SS or two 2SS HE80 802.11ax MU-MIMO capable client devices simultaneously
- 2.4GHz radio: Four spatial stream Single User (SU) MIMO for up to 1,150Mbps wireless data rate with individual 4SS HE40 802.11ax client devices or with two 2SS HE40 802.11ax MU-MIMO capable client devices simultaneously
- Support for up to 1,024 associated client devices per radio, and up to 16 BSSIDs per radio

Mr Sarmad Usman
Deputy Director (ADMIN/SMART)
Wednesday, 05 June, 2024, 10:4:46 AM

- Supported frequency bands (country-specific restrictions apply):
 - 2.400 to 2.4835GHz
 - 5.150 to 5.250GHz
 - 5.250 to 5.350GHz
 - 5.470 to 5.725GHz
 - 5.725 to 5.850GHz
- Available channels: Dependent on configured regulatory domain
- Dynamic frequency selection (DFS) optimizes the use of available RF spectrum
- Supported radio technologies:
 - 802.11b: Direct-sequence spread-spectrum (DSSS)
 - 802.11a/g/n/ac: Orthogonal frequency-division multiple access (OFDM)
 - 802.11ax: Orthogonal frequency-division multiple access (OFDMA) with up to 37 resource units (for an 80MHz channel)
- Supported modulation types:
 - 802.11b: BPSK, QPSK, CCK
 - 802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM (proprietary extension)
 - 802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM (proprietary extension)
 - 802.11ax: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM
- 802.11n high-throughput (HT) support: HT20/40
- 802.11ac very high throughput (VHT) support: VHT20/40/80/160
- 802.11ax high efficiency (HE) support: HE20/40/80/160
- Supported data rates (Mbps):
 - 802.11b: 1, 2, 5.5, 11
 - 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54
 - 802.11n: 6.5 to 600 (MCS0 to MCS31, HT20 to HT40), 800 with 256-QAM
 - 802.11ac: 6.5 to 1,733 (MCS0 to MCS9, NSS = 1 to 4, VHT20 to VHT160), 2,166 with 1024-QAM
 - 802.11ax (2.4GHz): 3.6 to 1,147 (MCS0 to MCS11, NSS = 1 to 4, HE20 to HE40)
 - 802.11ax (5GHz): 3.6 to 2,402 (MCS0 to MCS11, NSS = 1 to 4, HE20 to HE160)
- 802.11n/ac packet aggregation: A-MPDU, A-MSDU
- Transmit power: Configurable in increments of 0.5 dBm
- Maximum (aggregate, conducted total) transmit power (limited by local regulatory requirements):
 - 2.4 GHz band: +24 dBm (18dBm per chain)
 - 5 GHz band: +24 dBm (18 dBm per chain)
- Advanced Cellular Coexistence (ACC) minimizes the impact of interference from cellular networks
- Maximum ratio combining (MRC) for improved receiver performance
- Cyclic delay/shift diversity (CDD/CSD) for improved downlink RF performance
- Space-time block coding (STBC) for increased range and improved reception
- Low-density parity check (LDPC) for high-efficiency error correction and increased throughput
- Transmit beamforming (TxBF) for increased signal reliability and range
- 802.11ax Target Wait Time (TWT) to support low-power client devices

Wi-Fi Antennas

- AP-534: Four (female) RP-SMA connectors for external dual band antennas (A0 through A3, corresponding with radio chains 0 through 3). Worst-case internal loss between radio interface and external antenna connectors (due to duplexing circuitry): 0.8dB in 2.4GHz and 1.3dB in 5GHz.
- AP-535: Four integrated dual-band down tilt omni-directional antennas for 4x4 MIMO with peak antenna gain of 3.5dBi in 2.4GHz and 5.4dBi in 5GHz. Built-in antennas are optimized for horizontal ceiling mounted orientation of the AP. The down tilt angle for maximum gain is roughly 30 degrees.
 - A mix of horizontally and vertically polarized antenna elements is used

- Combining the patterns of each of the antennas of the MIMO radios, the peak gain of the combined, average pattern is 1.9dBi in 2.4GHz and 3.5dBi in 5GHz.

Power

- The AP supports direct DC power and Power over Ethernet (POE; on port E0 and/or E1)
- When POE power is supplied to both Ethernet ports, the AP can be configured to combine or prioritize power sources
- When both DC and POE power sources are available, DC power takes priority over POE
- Power sources are sold separately; see the ordering Information section below for details
- When powered by DC, 802.3bt (class 5) POE or 2x 802.3at (class 4) POE, the AP will operate without restrictions.
- When powered by 1x 802.3at (class 4) POE and with the IPM feature disabled, the AP will disable the USB port and disable the other Ethernet port. In the same configuration but with IPM enable restrictions depending on the POE budget and actual power. The feature restrictions and order can be programmed.

14. Firewall

Sr. No.	NG Firewall Requirement	Compliance
1	Interfaces 14 x GE RJ45 switching ports, 2 x WAN ports, 1HA port, 1 x Mgmt port, 4 x GE SFP slots with 2 x 1G SFP transceivers. Minimum onboard storage 480GB SSD or higher	
2	IPv4 and IPV6 Firewall Throughput (1518/512/64 byte, UDP) i.e. 20/20/9 Gbps. NGFW throughput 1.8 Gbps	
3	Concurrent Sessions (TCP) 2 million or higher	
4	Firewall Throughput (Packets Per Second) 13 Mpps	
5	Firewall Policies i.e. 10,000	
6	IPsec VPN Throughput (512 byte packets) i.e. 9 Gbps	
7	SSL-VPN Throughput i.e. 900 Mbps	
8	Optimal traffic mix IPS Throughput 6 Gbps and Enterprise traffic mix Threat protection throughput 1.2 Gbps. Application Control Throughput 3.5 Gbps and CAPWAP Throughput 1.5 Gbps	
9	Optional redundant power supplies	
10	SD-WAN features;	

	<ul style="list-style-type: none"> - Effective, cost-efficient and high-performance threat prevention capabilities - WAN Path Controller and Link Health Monitoring for better application performance - Centralized Management and Zero-Touch deployment - Secure direct Internet access for Cloud applications for improved latency and reduce WAN cost spending 	
11	3 years NGFW and UTM Bundle with 8 x 5 support of following: IPS, Antivirus/Anti-malware, Anti-Spyware, Anti-botnet, File-blocking, File-filtering (DLP), Sandboxing, App-ID, User-ID. URL filtering, Threat Prevention (Bundle Certificate from manufacturer in the name of end user)	

15. Server Machine (Qty = 01)

Intel Xeon (2.7GHz/12-core/125W) FIO Processor Kit	4
16GB (1x16GB) Single Rank x4 DDR4-2933 CAS-21-21-21 Smart Memory Kit	12
DL560 Gen10 Universal Media Bay Kit	1
1.8TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Warranty 512e Digitally Signed Firmware HDD	4
9.5mm SATA DVD-RW Optical Drive	1
Smart Array P408i-p SR Gen10 (8 Internal Lanes/2GB Cache) 12G SAS PCIe Plug-in Controller	1
Ethernet 10Gb 2-port SFP+ 57810S Adapter	1
96W Smart Storage Lithium-ion Battery with 145mm Cable Kit	1
Ethernet 1Gb 4-port FLR-T BCM5719 Adapter	1
BladeSystem c-Class 10Gb SFP+ SR Transceiver	2
1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	2
2U Cable Management Arm for Easy Install Rail Kit	1
2U Large Form Factor Easy Install Rail Kit	1
DL5x0 Gen10 CPU Version 2 Mezzanine Board Kit	1

16.	Microsoft 365 Business Standard Licenses for a period of three years	27
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17.	<p><u>DSLR Camera</u></p> <p>EOS Full Frame 6D Mark II With 24-105mm f/4L IS II USM Lens</p> <p>26.2MP Full-Frame CMOS Sensor, DIGIC 7 Image Processor, 45-Point All-Cross Type AF System, Full HD Video at 60 fps; Digital IS, 3" 1.04m-Dot Vari-Angle Touchscreen LCD, Dual Pixel CMOS AF and Movie Servo AF, Native ISO 40000, Expanded to ISO 102400, 6.5 fps Shooting; Time-Lapse & HDR Movie, Built-In GPS, Bluetooth & Wi-Fi with NFC, EF 24-105mm f/4L IS II USM Lens, Maximum Resolution: 6240 x 4160, Aspect Ratio: 1:1, 3:2, 4:3, 16:9, Sensor Size: 35.9 x 24 mm, Image File Format: JPEG, Raw. Continuous Shooting Up to 6.5 fps at 26.2 MP, Up to 3 fps at 26.2 MP. Recording Modes:</p>	01
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	<p>MP4/H.264 Full HD (1920 x 1080) at 23.976p/25p/29.97p/50p/59.94p, HD (1280 x 720) at 23.976p/25p/29.97p/50p/59.94p. Viewfinder Coverage: 98%, Connectivity: 3.5mm Microphone, Canon N3, HDMI C (Mini), USB Mini-B (USB 2.0).</p> <p>Lens Type = F mount Type E AF-S lens with built-in CPU Format = FX/35mm Focal length = 28 mm Maximum aperture = f/ 1.4 Minimum aperture = f/ 16 Lens construction = 14 elements in 11 groups (including 2 ED lens elements, 3 aspherical lens elements, and lens elements with Nano-Crystal or fluorine coatings) Minimum focus distance = 0.28 m (0.92 ft) from focal plane No. of diaphragm blades = 9 (rounded diaphragm opening) Coating = Nano Crystal Coat, Fluorine coat Diaphragm = Automatic electronic aperture control Filter-attachment size = 77 mm (P = 0.75 mm)</p>	
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18.	<p>CCTV Cameras: 100% Original 8 Full HD IP Camera Package Dahua</p> <ul style="list-style-type: none"> • 8 / 16 Full HD IP Cameras • (4MP – 1080p Water Proof – Day & Nigh Vision CCTV Cameras) • 8 / 16 Channel Network Video Recorder • 8- TB Hard Disk Drive • 8 / 16 port POE switch • 540 Feet CAT6 wire with RJ45 connector • Waterproof Box for Connectors • Including Installation with 1 Year Warranty 	-
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19. UPS	
Sr. No.	Specification for Tender Document
	<p><u>5KVA Rack Mount UPS with Built-in Battery Banks</u> 5KVA – Rack mount UPS with Rail Kits Single Phase Input Sealed Batteries, Maintenance Free Lead Acid Batteries Built-In Voltage Stabilizer & Surge Protection On-Line Double Conversion Fully loaded with Batteries Warranty 3 years UPS, 3 years for Batteries Complete installation of UPS with existing infrastructure</p>

20. Biometric Attendance Machine

Display	800 x 480 Pixel, LCD Capacitive Touch Screen
Verification Speed	≤1 sec (typical)
Capacity	ID Cards: 10,000 Transactions: 100,000 Face templates: 1500 Fingerprint templates: 3,000
Fingerprint Sensor	ZK2750P
Communications	Ethernet, Serial RS 232/RS 485, USB (host & client), Wi-Fi
Power	12V DC, 3A Optional: 12V POE injector Optional: 12V Battery Backup
Environment	Operating Temperature: 32° F to 113° F (0° C to 45° C) Operating Humidity: 5% to 80%
Dimensions	Approx Width: 7.6 in. (19.3 cm) Height: 6.4 in. (16.5 cm) Depth: 3.75 in. (9.5 cm) Weight: 1.75 lbs. (794 g)

21. Central Air Conditioning System

Description	Capacity	Unit
Supply of equipment / system (Latest VRF System)		
<u>Sub-Head "1" Equipment:</u>		
Supply of VRF All DC Inverter Condensing Units with built-in energy saving mode, with all standard accessories, control, safeties & fittings. The VRF system shall be able to operate up to 55 Degree C ambient temperature.	USRT	Per Ton
INSTALLATION & TESTING of following equipment / system and material as per schedule, specifications and drawings.		
<u>Sub-Head "2" Mechanical</u>		

Installation of VRF All DC Inverter Condensing Units with built-in energy saving mode, with all standard accessories, controls, safeties & fittings. The condensing units shall have operated range from -30 Degree C to 55 Degree C.	USRT	
Outdoor Unit	USRT	Per Unit
Installation of Multi Split IDUs to be connected with Latest VRF All DC Inverter system with all controls, thermostats and accessories/ fittings	USRT	
INDOOR UNITS	USRT	Per Unit
Supply & Installation of Copper tubes with all accessories / fittings/hanging frames.		
Refrigerant pipe with all fittings and installation	6.35	m
Refrigerant pipe with all fittings and installation	9.52	m
Refrigerant pipe with all fittings and installation	12.70	m
Refrigerant pipe with all fittings and installation	15.90	m
Refrigerant pipe with all fittings and installation	19.05	m
Refrigerant pipe with all fittings and installation	22.20	m
Refrigerant pipe with all fittings and installation	25.40	m
Refrigerant pipe with all fittings and installation	28.60	m
Supply & Installation of Closed cell foam insulation 1/2" thick for liquid / gas copper pipes with all accessories.		
Refrigerant pipe insulation	6.58	m
Refrigerant pipe insulation	9.52	m
Refrigerant pipe insulation	12.70	m
Refrigerant pipe insulation	15.90	m
Refrigerant pipe insulation	19.05	m
Refrigerant pipe insulation	22.20	m
Refrigerant pipe insulation	25.40	m
Refrigerant pipe insulation	28.60	m
Supply & Installation of condensate drain piping UPVC with 1/2" thick armaflex insulation or equivalent		
UPVC Drain pipe with insulation	19 mm	m
UPVC Drain pipe with insulation	25 mm	m
UPVC Drain pipe with insulation	32 mm	m
Supply & Installation of Supply & return air diffusers / Grills		S.FT

Supply, fabrication and installation of G.I. duct work , using prime quality sheet metal including all tees, bends, reducers, elbows, turning vanes splitters and dampers etc. as specified in specifications, shown on the drawings / Standards Drawings and directed by the engineer in charge.		S.FT
Supply & Installation of fiber glass insulation 1" thick, 16 KG/M3 density with factory applied vapor barrier insulation on duct work with 8 oz Canvas cloth wrapping with adhesive. All longitudinal and circumferential joints shall be sealed with 2" wide self-adhesive tape complete as specified in the specifications shown on the drawings, specified in the Schedule of Duct insulation and as directed by the engineer in charge.		S.FT
Supply & Installation of Flexible duct connector minimum 3" wide as shown in the drawings and directed by the engineer in charge.		S.FT
Supply & Installation of Dura Duct for wall mounted unit		FT
Air balancing of complete HVAC system		Job
Preparing & supplying of shop drawings for HVAC system		Job
Preparing & supplying of as built drawings for HVAC system.		Job
Supply & Installation of 18 Gauge G.I Trunking/cable tray with top cover for VRF system exposed copper piping & electrical wiring as per drawings and directed by engineer in charge.		
Trunking/Cable tray	12" x 6"	m
Trunking/Cable tray	6" x 4"	m
Commissioning, running and testing of complete HVAC system.		Job
Supply 8s filling of Additional Refrigerant Gas (R410a) in VRF system copper tubes.		1 KG
<u>Sub Head "3" Electrical Work.</u>		
Supply & installation of electrical work related to HVAC system including power wire, earth wire electrical panels. (Main power wire to HVAC electrical panel shall be provided by client.)		
Power Wire		
Supply & Installation of 1x 4 core 16 mm square pvc/pvc copper conductor cable with conduit.	16mm2 (4core)	m
Supply & Installation of 1x 3 core 4 mm square pvc/pvc copper conductor cable with conduit.	4mm2 (3core)	m
Earth wiring		
Supply & Installation of Single core 10 mm square pvc/pvc copper conductor cable with conduit.	10mm2	m

Communication wiring		
Supply & Installation of Communication wiring from outdoor relevant unit to each indoor unit. Shielded wire 2 core 0.75 sqmm with conduit.	2 core 0.75mm ²	m
HVAC Electrical panels		
Supply & installation of electrical panel/DB/MCCB including voltmeter, amperemeters, selector switches, star delta connections if required, current transformers, indication lights, control fuse, over voltage/undervoltage relays, pure 100% copper bus bars, IP 54 & 55 protected etc. as per HVAC requirement and as mentioned in drawing and directed by engineer recharge.		
MCC-1 HVAC		No.
<u>Sub Head "4" Civil Work</u>		
RGC Platform for all equipment as required		Job
Proper Beam Cutting and other holes for pipes.		Job

Letter of Intention

Bid Ref No.

Date of the Opening of Technical Bid

To: *[Deputy Director Admin], SMART Project, Prime Minister's Office, Board of Investment, 3rd Floor, Evacuee Trust Complex, Agha Khan Road, Islamabad*

Dear Sir/Madam,

Having examined the bidding documents, including Addenda Nos. [insert numbers & Date of individual Addendum], the receipt of which is hereby acknowledged, we, the undersigned, offer to supply and deliver the Goods in full conformity with the said bidding documents and at the rates/unit prices described in the price schedule provided in Financial Bid or such other sums as may be determined in accordance with the terms and conditions of the Document. The above amounts are in accordance with the Price Schedules attached herewith and are made part of this bid.

We undertake, if our Financial Bid is accepted, to deliver the Goods in accordance with the delivery schedule specified in the schedule of requirements.

If our Financial Bid is accepted, we undertake to provide a performance security/guarantee in the form, in the amounts, and within the times specified in the bidding documents.

We agree to abide by this bid, for the Bid Validity Period specified in the bidding documents and it shall remain binding upon us and may be accepted by you at any time before the expiration of that period.

We understand that you are not bound to accept the lowest or any Financial Bid you may receive. We undertake that, in competing for (and, if the award is made to us, in executing), we will strictly observe the laws against fraud and corruption in force in Pakistan.

We confirm that we comply with the eligibility requirements as elaborated in the tender document and have duly provided bid security @ 5% of the total bid value, in the shape of a pay order/demand draft/call deposit in the name of _____ with our Financial Bid.

Dated this *[insert:number]* day of *[insert:month]*, *[insert:year]*.

Signed:

In the capacity of [insert: title or position]

Duly authorized to sign this bid for and on behalf of [insert: name of Bidder]

MANUFACTURER'S AUTHORIZATION

To: *[Deputy Director Admin], SMART Project, Prime Minister's Office, Board of Investment, 3rd Floor, Evacuee Trust Complex, Agha Khan Road, Islamabad*

WHEREAS *[name of the Manufacturer]* who are established and reputable Manufacturers of *[name and/or description of the goods]* having factories at *[address of factory]* do hereby authorize *[name and address of Supplier / Agent]* to submit a bid with you against the Invitation for Bids (IFB)/Tender Document No.*[-----]* for the goods manufactured by us.

We hereby extend our full guarantee and warranty as demanded or the goods offered for supply by the above firm against this Invitation for Bids.

Signature:-----

Designation:-----

Official Stamp:-----

This letter of authority should be on the letterhead of the Manufacturer and should be signed by a person competent and having the power of attorney to bind the Manufacturer.

Performance Guarantee

To: *[Deputy Director Admin], SMART Project, Prime Minister's Office, Board of Investment,
3rd Floor, Evacuee Trust Complex, Agha Khan Road, Islamabad*

Whereas *[Name of Supplier]* (hereinafter called "the Supplier") has undertaken, in pursuance of Tender Document No. *[number]* dated *[date]* to supply *[description of goods]*.

And whereas it has been stipulated by you in the said Tender Document No. that the supplier shall furnish you with a Bank Guarantee by a scheduled bank for the sum of 10% of the total Supply Order amount as a Security for compliance with the Supplier's performance obligations as per satisfaction of the Board of Investment.

And whereas we have agreed to give the Supplier a Guarantee:

Therefore we hereby affirm that we are Guarantors and responsible to you, on behalf of the Supplier, up to a total of *[Amount of the Guarantee in Words and Figures]* and we undertake to pay you, upon your first written demand declaring the Supplier to be in default and without cavil or argument, any sum or sums within the limits of *[Amount of Guarantee]* as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the _____ day of _____, 202x _____

Signature and Seal of the Guarantors/ Bank
Address
Date

*Mr Sarmad Usman
Deputy Director (ADMIN/SMART)
Wednesday, 05 June, 2024, 10:4:46 AM*

ANNEXURE-F

Financial Proposal Submission Form (Part of Financial Bid Envelope)

[Location, Date]

To,

*[Deputy Director Admin], SMART Project, Prime Minister's Office, Board of Investment,
3rd Floor, Evacuee Trust Complex, Agha Khan Road, Islamabad*

Dear Sir/Madam,

We, the undersigned, offer to provide the (Insert title of assignment) in accordance with your Request for Proposal/Tender Document No. _____ dated (insert date) and our Technical Proposal. Our attached Financial Proposal is for the sum of (insert amount in words and figures). This amount is inclusive of all taxes.

Our Financial Proposal shall be binding upon us up to the expiration of the validity period of the Proposal, i.e. before the date indicated in _____ of the Proposal Data Sheet.

We also declare that the Government of Pakistan has not declared us, ineligible on charges of engaging in corrupt, fraudulent, collusive, or coercive practices. We, furthermore, pledge not to indulge in such practices in competing for or in executing the Supply Order and are aware of the relevant provisions of the Proposal Document.

We understand you are not bound to accept any Proposal you receive.

Signed

In the capacity of:

Duly authorized to sign the proposal on behalf of the Applicant.

Date:

ANNEXURE-F-1

Bill of Quantity

Sr. No.	Item Description	No of Units/QTY (1)	Unit Rate (Excl. Taxes) Rs. (2)	Total Taxes (3)	Unit Rate (Incl. all Taxes) Rs. (4=2+3)	Total Cost (Incl. all Taxes) Rs (5=1x4)
1						
Total Bid Price						X

Notes to Price Table:

- i. **X** will determine the total bid cost.
- ii. Hardware quoted must be legally imported in Pakistan after paying all taxes.
- iii. Standard Warranty for three (3) year after purchase of equipment

Total Cost (in words) Rs. _____

Date _____

Signature of
authorized person

Name:

(Company Seal)

In the capacity of Duly Authority by

Note: No cutting or overwriting is allowed. Any cutting or overwriting will lead to rejection of the financial bid.

ANNEXURE-F-2

Financial Capacity of the Bidder

Additionally, the following financial data form shall be filled out for the Bidder. The Purchaser reserves the right to request additional information about the financial capacity of the Bidder. A Bidder that fails to demonstrate through its financial records that it has the financial capacity to perform the required Supply/Services may be disqualified.

Financial Information	Historical information for the previous three years (most recent to oldest in (PAK Rupees)		
	Year 1 (Year)	Year 2 (Year)	Year 3 (Year)
Information from Balance Sheet:			
(1) Total Assets (TA)			
(2) Current Assets (CA)			
(3) Total Liabilities (TL)			
(4) Current Liabilities (CL)			
Information from Income Statement:			
(5) Total Revenue (TR)			
(6) Profits before Taxes (PBT)			
Net Worth (1) – (3)			
Current Ratio (2) / (4)			

Provide information on current or past litigation or arbitration over the last three (3) years as shown in the form below.

Litigation or arbitration in the last three (3) years: No: _____ Yes: _____ (See below) Litigation and

Arbitration During Last three (3) Years

Year

Matter in Dispute

Value of Award
in PAK Rupees

Authorized Signatures with Official Seal