

**RESPONSE TO BIDDERS QUERIES AGAINST TENDER NO. PITC/G-224(112)/02-2025**

The pre-bid meeting held on February 18, 2025. Following Companies participated

1. JAFFER BUSINESS SYSTEMS (PVT) LIMITED
2. FUTUREAGE COMPUTERS
3. SPECTRA INNOVATIONS
4. DWP TECHNOLOGIES
5. WATEEN SOLUTIONS
6. M/S MEGA PLUS

| Sr. # | Query  | Reply    |
|-------|--|----------|
| 01    | LOT # D-I and D-II should be treated as separate LOTS        | Accepted |
| 02    | Bid money in shape of Bank Guarantee should also be accepted | Accepted |

The Specifications of following LOTS has been amended as per queries raised by pre-bid meeting participants:

**LOT A: TECHNICAL SPECIFICATIONS – SERVERS**

| ENTERPRISE SERVERS  |  |   |          |                 |                 |
|---|--|---|----------|-----------------|-----------------|
| Brands: HP/IBM/Dell/Fujitsu/H3C or Equivalent internationally recognized brands |  |   |          | On FCS Basis    |                 |
| Sr.   | ITEM                                   | DESCRIPTION   | Est. QTY | Unit Rate (PKR) | Unit Rate (PKR) |
|   | Device farm factor                     | 2U Rack mount Server with at least 8 2.5 (SFF) disk slot  | 16       |                 |                 |
|   | Processor                              | 2x Intel® Xeon® Gold 6542Y, 2.9 GHz or Higher, 24C/48T or higher  |          |                 |                 |
|   | Memory                                 | 1 TB RAM, DDR5 4400 MHz RDIMMs or Higher  |          |                 |                 |
|   | Hard Disk Drive                        | 4 x 3.2 TB NvMe SSD 2.5 PCIe Gen 3 or higher<br>Built-in disk type: hot-swappable                               |          |                 |                 |
|   | RAID Controller                        | Should Support Raid 0,1, 5, 10 with min 8 GB Cache  |          |                 |                 |
|   | Remote Management                      | Enterprise Remote Management  |          |                 |                 |
|   | I/O Expansion                          | Server Should Support 08 or higher PCIe Standard Slots  |          |                 |                 |
|   | Onboard Network Adapter                | (2 * Port 10Gb SFP+, 2 * Port 10Gb Ethernet) / 4 * Port 1 Gb or Higher<br>Should Support atleast 1 OCP 3.0 Slot |          |                 |                 |
|   | Dual Port FC/HBA card for SAN storage. | 16/32 GB or higher  |          |                 |                 |

|                   |   |  |  |  |
|-------------------|---|--|--|--|
| Power Supply      | Redundant hot-swappable dualPower Supply Unit in full configuration (1+1)   |  |  |  |
| Stability         | Support operating temperature under specific conditions i.e. 5°C-45°C   |  |  |  |
| System Management | Support remote management with dedicated port   |  |  |  |
| Compatibility     | Supports mainstream operating systems, such as Windows, Redhat Linux, SuSE Linux, Oracle Linux, VMware and Citrix Xeon Server   |  |  |  |
| Support           | 03 year comprehensive OEM warranty / support<br>OEM Must Have Registered Office With SECP and 3-Years Local Presence With Local Warehouses in ISB, LHR & KHI and Local OEM Support Team |  |  |  |

**LOT B: TECHNICAL SPECIFICATIONS - DESKTOP COMPUTERS**

| DESKTOP COMPUTERS   |   |  |          |                 |                 |
|---|---|--|----------|-----------------|-----------------|
| Brands: HP/IBM/Dell or Equivalent internationally recognized brands |   |  |          | On FCS Basis    |                 |
| Sr.   | ITEM  | DESCRIPTION  | Est. QTY | Unit Rate (PKR) | Unit Rate (PKR) |
| B-1   | Intel Core i7 Branded Desktop 14 <sup>th</sup> Generation | Intel® Core™ i7-14700 vPro® (33 MB cache, 20 cores, 28 threads, 2.10 GHz to 5.30 GHz Turbo, 65W) (14th Gen) with Vpro Enterprise or higher. Intel Chipset H/Q 670 or above. 32GB (2 x 16GB) DDR5 or Higher expandable upto 64 GB or more. Hard Disk Drive: 1 TB SSD PCIe NVMe or Higher, Integrated Intel Graphics 770, Manufacturer Standard KeyBoard & Mouse with Pad. Intel AX211 2x2 Wi-Fi 6E (802.11ax). 1 x HDMI, 1 x VGA port or 1 x DP Port, 2x USB 3.2 Type-A Gen 2, 3x USB 3.2 Type-A Gen 1, 2x USB 2.0, 1x USB 3.2 Gen , RJ-45, UAJ headphone, line out. Security: TPM 2.0, standard security lock slot. Mini Tower/Tower Casing with Power Supply as per Manufacturer Standard, with pre-installed latest windows 11 Pro by OEM, 23" inch or higher FHD Monitor (Same Brand) | 24       |                 |                 |
|   | Support   | 03 year parts / labor comprehensive OEM warranty / support for all components on site  |          |                 |                 |

**LOT C: TECHNICAL SPECIFICATIONS – LAPTOPS**

| <b>LAPTOPS</b>   |  |  |                 |                        |                        |
|--|--|--|-----------------|------------------------|------------------------|
| <b>Brands: HP/IBM/Dell or Equivalent internationally recognized brands</b> |  |  |                 | <b>On FCS Basis</b>    |                        |
| <b>Sr.</b>   | <b>ITEM</b>                            | <b>DESCRIPTION</b>   | <b>Est. QTY</b> | <b>Unit Rate (PKR)</b> | <b>Unit Rate (PKR)</b> |
| C-1  | Intel Core Ultra 7 Branded Laptop 15.6 | Intel Core™ Ultra 7 155U<br>15.6" or higher FHD IPS, Non-Touch, Anti Glare, 250nit or higher, 45% NTSC<br>Memory: Min 16 GB DDR5, Supported Upto 32 GB<br>Storage: 1 TB SSD M.2 Gen 4 PCIe NVMe, Long Life Battery 3 cell, Li-ion, with Express/Fast Charger support, Intel graphics with Intel Core Ultra, Integrated Sound, Intel Wi-Fi 6 2x2, BT 5.3 Wireless Card, FHD HDR Camera, Touch pad, spill Resistant Backlit AI Hotkey Keyboard, 1x USB Type-C with Power Delivery & Display Port, 2x USB 3.2 Gen1 (1x with Power share), 1x HDMI 2.0 or higher, 1x RJ45, 1 x Universal Audio jack, Pre-installed genuine Windows 11 Professional edition (64-Bit) or higher by OEM, Pre-installed Microsoft Office 365 (E1 for One (01) year's subscription), Original manufacturing case, Manufacturer 65W Adapter -Type-C. | 104             |                        |                        |
|  | Support                                | 03 year parts / labor comprehensive OEM warranty / support for all components on site  |                 |                        |                        |

**LOT D-I: TECHNICAL SPECIFICATIONS – NETWORK SWITCH**

| <b>NETWORK SWITCH</b>                                   |  |                 |                        |                        |
|---|--|-----------------|------------------------|------------------------|
| <b>Brands: Any International Brand – Network Switch</b> |  |                 | <b>On FCS Basis</b>    |                        |
| <b>Sr.#</b>   | <b>ITEM DESCRIPTION</b>  | <b>Est. QTY</b> | <b>Unit Rate (PKR)</b> | <b>Unit Rate (PKR)</b> |
| 1   | Should have 24 x 1G Ethernet PoE+ Ports  | 15              |                        |                        |
| 2   | Should have 4 x 10G SFP+ Ports (Loaded with 2 x Single mode Long Range (10km) 10G SFP+ Transceiver module)<br>Note: SFPs should be of same brand that of quoted switch |                 |                        |                        |
| 3   | Should have 127 Gbps or more port switching capacity   |                 |                        |                        |
| 4   | Should have 500 Gbps or more box switching capacity  |                 |                        |                        |
| 5   | Forwarding rate should be more than 95 Mpps  |                 |                        |                        |
| 6   | Must include dual fan or higher  |                 |                        |                        |

|    |  |  |  |  |
|----|--|--|--|--|
| 7  | Should be a Manageable Enterprise grade Switch with Layer-3 features such as RIP, RIPng, OSPF & OSPFv3 and IS-IS                                       |  |  |  |
| 8  | Should support Spanning Tree Protocol, 802.1D STP, 802.1W RSTP & 802.1S MSTP   |  |  |  |
| 9  | Should support Stacking of local and remote devices through standard Ethernet interfaces. Should support stacking of 9 switches or more                |  |  |  |
| 10 | Enterprise Switch CPU must be Dual Core, 990MHz or higher  |  |  |  |
| 11 | Should Support Link Aggregation Protocol   |  |  |  |
| 12 | Should have 4K or more VLANs support and 32K MAC address entries   |  |  |  |
| 13 | Broadcast, Multicast and Unicast Storm Control Support   |  |  |  |
| 14 | Port Mirroring, RSPAN or equivalent must be supported  |  |  |  |
| 15 | Should support IPv4 routing entries 6012 or higher   |  |  |  |
| 16 | Should support IPv4 ARP entries 4000 or higher   |  |  |  |
| 17 | Should Support Time & Vlan Based ACLs. In addition the switch must be capable of configuring the bidirectional ACLs                                    |  |  |  |
| 18 | Should support SNMP v1, 2 & 3  |  |  |  |
| 19 | Switch RAM must be 1GB or higher   |  |  |  |
| 20 | Switch Flash must be 512MB or higher   |  |  |  |
| 21 | Should support security features like IP Source Guard, AAA, RADIUS, 802.1x and Centralized MAC Based Authentication, DHCP Snooping etc.                |  |  |  |
| 22 | Support 12000 Jumbo Frame size or higher   |  |  |  |
| 23 | QoS Support 8 Queues Per Port, Traffic classification based on IEEE 802.1p DSCP, CAR, Access Control List  |  |  |  |
| 24 | Should provide embedded free NMS with Intelligent operation and smart management or bidder may quote separate Solution to support the required feature |  |  |  |
| 25 | 3- Years Equipment warranty from OEM   |  |  |  |
| 26 | 100% technical compliance is must  |  |  |  |
| 27 | All equipment should be of same OEM (Switches and SFPs)  |  |  |  |
| 28 | Valid Certificate from Manufacturer (MAL/MAF) for the current year should be provided  |  |  |  |
| 29 | OEM must be legally present and SECP registered in Pakistan for atleast 5 years  |  |  |  |
| 30 | OEM must have Local Registered Office, Local Warehouse presence in Pakistan preferably Islamabad, Lahore & Karachi and Also local OEM Support Team     |  |  |  |

**LOT D-II: TECHNICAL SPECIFICATIONS – SAN SWITCH**

| <b>SAN SWITCH</b>  |                           |  |                 |                        |                        |
|--|---------------------------|--|-----------------|------------------------|------------------------|
| <b>Brands: CISCO, Brocade , Qlogic or Equivalent brand</b> |                           |  |                 | <b>On FCS Basis</b>    |                        |
| <b>Sr.</b>   | <b>ITEM</b>               | <b>DESCRIPTION</b>   | <b>Est. QTY</b> | <b>Unit Rate (PKR)</b> | <b>Unit Rate (PKR)</b> |
|  | Compliant Standards       | Regulatory Compliance (EMC)<br>2014/30/EU, AS/NZS CISPR 32 (Australia) (Class A)<br>EN 55024, EN 55032 (Class A), EN 61000-3-2<br>EN 61000-3-3, FCC Part 15, Subpart B (Class A)<br>ICES-003 (Canada), KN 32, KN 35, VCCI-32 (Japan)<br>Regulatory Compliance (Safety)<br>• 2014/35/EU<br>• CAN/CSA-C22 No.62368-1<br>• EN/IEC 60950-1<br>• EN/IEC 62368-1<br>• EN/UL 60825<br>• EN/UL/CSA/IEC 60950-1<br>• UL 62368-1 | 02              |                        |                        |
|  | FC Standards              | FC-GS-8 INCITS 548-2020<br>FC-IFR, FC-SP-2, FC-SP<br>FC-SW-7, FC-SW-6, FC-SW-5, FC-SW-4, FC-SW-3<br>FC-VI, FC-DA-2 (FC-DA, FC-FLA, FC-PLDA)<br>FC-MI-3, FC-MI-2<br>FC-PI-6, 10GFC, FC-FS-4<br>FC-LS-3, FC-BB-6, FC-SB-6<br>FA FCMGMT-MIB, RFC 4338, RFC 2837 Fabric Element MIB, MIB-FA<br>FCP-4, FCP-3, FCP-2, SNIA SMI-S   |                 |                        |                        |
|  | Enclosure type            | Rack mountable 1U Fiber Channel Switch   |                 |                        |                        |
|  | Ports & Port Upgrades     | Should be upgradeable to 24 Ports with flexible Ports on Demand (PoD) upgrades with auto-sensing of 4, 8, 16, and 32G port speeds as per FC standards  |                 |                        |                        |
|  | Active Ports with SFP+    | 16 Active Ports with 32Gbps SWL SFPs Fiber Channel   |                 |                        |                        |
|  | Bandwidth & Frame Buffers | Switch should support Aggregate bandwidth of 768Gb/s & 2000 Frame Buffers  |                 |                        |                        |
|  | Port Types                | E_Ports, F_Ports, M_Ports, and D_Ports   |                 |                        |                        |
|  | Meida Types               | 32G FC SFP+ LC connector: SWL, LWL, ELWL   |                 |                        |                        |

|   |  |  |  |  |
|---|--|--|--|--|
|   | 16G FC SFP+ LC connector: SWL, LWL, ELWL   |  |  |  |
| Remote management protocol                | HTTP/HTTPS; SNMP v1/v3, SSH, SFTP  |  |  |  |
| Management                                | Web Tools, Command Line Interface (CLI); RESTful API; (FE MIB, FC Management MIB)  |  |  |  |
| Authentication Method & Security Features | DH-CHAP (between switches and end devices), FCAP switch authentication; HTTPS, IP filtering, LDAP with IPv6, OpenLDAP, Port Binding, RADIUS, TACACS+, User-defined Role-Based Access Control (RBAC), Secure Copy (SCP), Secure Syslog, SFTP, SSH v2, SSL, Switch Binding, Trusted Switch |  |  |  |
| Status Indicators (LEDs)                  | System Status, Power Status, SFP Status, Power & FAN Status  |  |  |  |
| Management Access                         | 10/100/1000 Mb/s Ethernet (RJ-45), in-band over Fibre Channel, serial port (RJ-45) and one USB port  |  |  |  |
| Support (Backline)                        | 03 year comprehensive OEM warranty / support with 4 Hrs response time  |  |  |  |

**LOT E: TECHNICAL SPECIFICATIONS – LED Screens**

| <b>LED SCREENS</b>  |    |                            |                             |
|---|----|----------------------------|-----------------------------|
| <b>DESCRIPTION</b>  |    | <b>On FCS Basis</b>        |                             |
|   |    | <b>Unit Rate<br/>(PKR)</b> | <b>Total Rate<br/>(PKR)</b> |
| <p>LED Screens for developers 23” HD Display.</p> <p>23-inch, FHD 1920 x 1080 resolution<br/>                     LED Backlight panel<br/>                     In-Plane Switching Panel<br/>                     178 / 178 viewing angle<br/>                     250 nits brightness<br/>                     1000:1 contrast ratio, 3M:1 dynamic contrast ratio<br/>                     7ms response time<br/>                     72% color gamut and 16.7M colors<br/>                     Anti-glare screen</p> <p>Connectivity.</p> <p>1 x VGA or 1 x DP Port<br/>                     1 x HDMI1.4<br/>                     3 x USB3.0 downstream, 1 x USB3.0 upstream can</p> <p>Mechanical.</p> <p>Frame type tilt stand<br/>                     Cable management</p> <p>Multimedia.</p> <p>1 x Audio out</p> | 10 |                            |                             |