

PROCUREMENT OF CARGO/ VEHICLE SCANNER FOR JIAP, KARACHI

OPERATIONAL AND TECHNICAL SPECIFICATIONS/COMPLIANCE SHEET

This RFP invites proposals from reputable firms for the supply, installation & commissioning, training and other associated services for **Cargo/ Vehicle Scanner** for Jinnah International Airport, Karachi as per following minimum operational & technical specifications, on FOR basis:

S. No.	Tender Requirements	Qty	Compliance	Remarks / Reference
1.	GENERAL INFORMATION			
1.1.	Name of the Firm			
1.2.	Firm Address			
1.3.	Contact No.			
1.4.	Name of Principal / OEM			
1.5.	Principal's Address			
1.6.	Make & Type of the offered Equipment			
1.7.	Model No. (Specify if applicable)			
1.8.	Country of Origin (OEM)			
1.9.	Country of Manufacture (Specify)			
1.10.	The bidder shall fill and submit this technical & operational specification compliance, document duly signed and stamped by bidder and OEM, with technical bid.			
1.11.	The bidder shall duly provide appropriate remarks and/or references to the relevant supporting documents under the 'Remarks & Reference' column against each specification, wherever applicable.			
1.12.	The bidder shall quote the cost for each item separately and attach relevant documents for all items and services, including the optional services mentioned in this RFP (if any).			
1.13.	The cost of optional items and services, wherever mentioned, shall be quoted by the bidder separately and shall not be part of financial evaluation. However, availing or inclusion of these items shall remain at the sole discretion of PAA.			
1.14.	In the case of local representative, the bidder shall submit a valid Authorization Certificate from the OEM. The OEM certificate shall include authorization for resale, distribution, installation/commissioning and after-sale services of offered equipment. Authorization certification of bidder from any other authorized agent (sub-authorization) shall not be accepted.			

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1.15.	Bidder must have technical facilitation/Service centers technical man power for repair /technical supports for ensuring services for warranty/ post warranty period in Pakistan (minimum 2 x Major cities of Pakistan).			
1.16.	Bidder shall submit the undertaking of technical support through manpower and remote assistance during and post warranty period.			
1.17.	The bidder shall submit OEM certificate, guaranteeing the following services and support from date of installation & commissioning of system: (a) Availability of spares for 10 years . (b) Continuity of after-sale support including firmware upgrades, releases, patches, and related services etc. for 10 years .			
1.18.	The bidder shall offer the latest available OEM model complying with this RFP.			
1.19.	Machines of the offered model / equipment shall have been successfully deployed and operational at Airports in at least 10 countries. Verifiable documentary evidence shall be provided.			
1.20.	The bidder must attach all relevant technical brochures, literature, and datasheets of offered system and all accessories, in their bids, properly numbered, labeled and cross-referenced. (Document reference number to be filled under Reference Column).			
1.21.	Comprehensive details of offered system with itemized list in the technical offer and itemized cost (with breakup) in financial offer covering Hardware, Software, Installation / Commissioning, Trainings / FAT.			
1.22.	The bidder shall provide OEM-approved SOPs for operation, routine maintenance, preventive maintenance, troubleshooting and fault recovery of the equipment. The SOPs shall be supplied in English, in both hard and soft copy formats, and shall cover all procedures necessary for safe, efficient and continuous operation of the equipment throughout its service life.			
1.23.	The bidder shall provide all hardware, software, licenses, accessories, interfaces, cables, installation materials and incidental items required for complete installation, integration, testing and operation of the system, whether specifically listed or not.			
1.24.	For bid evaluation purposes, the quoted price of the main equipment shall carry a weightage of 80%, while the quoted price of spares and consumables shall carry a weightage of 20%. The prices of spares and consumables shall be quoted separately and shall not be included in the total bid value submitted for the main equipment. For evaluation purposes, the weighted evaluated price shall be determined as follows: Evaluated Price = (Main Equipment Price × 80%) + (Spares & Consumables Price × 20%)			

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	Note: The Contract Award Price shall comprise only the price of the main BOQ components. Prices of spares and consumables shall be used solely for evaluation purposes and shall not form part of the Contract Award Price.			
1.25.	SLA (Optional) The bidder shall separately quote the cost of SLA for a period of two (02) years beyond the warranty period. Note: The decision for opting of items mentioned as Optional in bidding documents will be at the discretion of PAA. However, the prices of Optional items will not be considered for financial evaluation. The cost of 2 year SLA shall remain frozen for a period of 1 year after the expiry of warranty period of equipment.			
1.26.	The bidder shall submit Performance Bond for an amount equal to 10% of total contract value, for the period covering Delivery, installation / commissioning, training and Warranty for equipment as mentioned in the bidding documents. The performance Bond against equipment contract shall be kept valid *till Three (03) months beyond the expiry of warranty period*. During this time, PAA will at its discretion decide to purchase spares and consumables / SLA at the frozen price (for 02 years beyond warranty period) or otherwise. However, if PAA decides to purchase consumables and spares/ SLA, the Performance Bond under equipment contract will be returned after signing of contract for Consumables, Spares/ SLA and submission of performances bond against it. If the supplier refuses or withdraws to sign the contract for spares & consumables / SLA during frozen price period, the performance bond submitted with equipment contract shall be forfeited.			
2.	SCOPE			
2.1.	The successful bidder shall be responsible for the supply, delivery, installation, testing, commissioning and operationalization of Qty One (01) Cargo/ Vehicle Scanner for Jinnah Internal Airport (JIAP), Karachi. PAA reserves the right to change the deployment locations anywhere within Pakistan without any change in the contract price. The scope of work shall include, but not be limited to, the following: (a) Cargo/ Vehicle Scanner Qty.1 (b) FAT and Factory Trainings, (c) Installation and Commissioning, (d) On-site Operational & Technical Trainings. (e) Site Acceptance Test (SAT)	1 unit		
3.	OPERATIONAL REQUIREMENTS / SPECIFICATIONS			

S. No.	Tender Requirements	Qty	Compliance	Remarks / Reference
3.1.	Detection of contraband, explosives, weapons, nuclear/radioactive materials, and illicit goods without unloading cargo. Includes: - High-energy X-ray scanning system - Imaging and analysis software - Operator workstations - Radiation safety systems			
3.2.	Goods will not be accepted if any software or component is manufactured or designed by India or Israel. The bidder shall furnish an OEM certificate confirming compliance with this requirement.			
4.	TECHNICAL SPECIFICATIONS			
4.1.	System performance requirements			
a)	Nominal X-ray energy: < 4 MeV			
b)	Modes: Pass through			
c)	Steel penetration: ≥ 230 mm steel equivalent			
d)	Image display time (please specify)			
4.2.	Scanning configuration			
a)	Pass through Mode: The scanner is stationary and the target vehicle drives through the X-ray beam			
b)	Throughput: min 100 trucks per hour			
c)	Low dosage(safe) scanning for passenger compartment			
4.3.	Radiation safety			
a)	Compliant with international safety limits, integrated emergency stops, and radiation safety regulations			
b)	The system shall automatically detect abnormal radiation conditions, generate alarms and place the system in a safe state.			
4.4.	Radiation safety zone			
a)	Image Processing Software: High-resolution image display, zoom/pan, organic & inorganic color coding, edge enhancement, density measurement, image comparison, automatic threat detection			
4.5.	Integrated CCTV surveillance and inspection record management system			

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a)	CCTV surveillance systems with ANPR and Container tracking databases: The Bidder shall provide, install, configure and commission an integrated IP-based CCTV surveillance system as part of the Cargo/Vehicle X-ray Scanning System. The number, type and placement of cameras shall be determined by the Bidder during the mandatory site survey to ensure complete coverage of the vehicle approach, scanning lane, scanning area, exit and all other critical operational areas, without any blind spots. The CCTV system shall incorporate Automatic Number Plate Recognition (ANPR) capability and shall support facial recognition analytics. The system shall automatically correlate CCTV recordings, ANPR data and images for each inspection event and maintain a secure, searchable electronic database containing, as a minimum, the vehicle registration number, date and time stamp, X-ray images, CCTV images, operator identification, alarm status and inspection outcome. The database shall support search, filtering, playback, retrieval and export of records based on configurable search criteria and shall maintain a complete audit trail of all inspection records.			
4.6.	Data retention			
a)	The system shall provide configurable data retention capability for minimum 500k images. The system shall retain X-ray images along with its associated inspection records, CCTV recordings, ANPR data, alarm data, operator logs and metadata.			
b)	Maintenance logs, audit trails and system event logs shall be retained for a minimum period of 365 days. The system shall support secure archival, retrieval, backup and export of retained data without degradation of system performance.			
c)	The system shall support automatic backup and restoration of databases, images, audit logs and system configurations.			
d)	The system shall maintain an audit trail of all operator, maintenance and administrative activities with date and time stamps			
4.7.	Environmental conditions			
a)	Operating temperature: -5°C to +55°C standard			
b)	Humidity: Up to 95%			
c)	Dust protection: Industrial grade			
d)	Power supply: 380–415 V, 3-phase			
4.8.	Joint Screening Room			
a)	There should be separate control room for joint screeners.			

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b)	The screener workstations shall provide role-based user access with configurable access rights. The system shall support multiple user roles with configurable permissions for viewing images, operating the scanner, modifying system settings, accessing archives, generating reports, and performing administrative functions. User authentication and activity logging shall be supported.																							
c)	Generic human avatar display																							
5.	CENTRALIZED MANAGEMENT SOFTWARE																							
5.1.	Centralized, network-compatible management software capable of monitoring, analyzing, managing, configuring and reporting machines through an authorized network. The software must have the following capabilities: i. Centralized Dashboard: Displaying real-time status of all connected screening systems including operational status (e.g., Ready, Warning, Alarm, offline), throughput, operator activity, system health etc. ii. Remote Administration: Capability to perform remote system configuration and diagnostics. iii. Archiving, Reporting & Search: Automated background archiving of images, alarms, events, operational records and device history in a centralized database. The software shall support configurable reporting and advanced search/filtering based on time, data, device. iv. Access Control: Role-based user access and audit trail for administrative activities. v. Integration: capability to interface with other airport screening equipment through industry standard communication interfaces or API, where required by PAA. vi. Scalability : The software shall have provision for future expansion to accommodate additional screening systems and workstations without any additional cost impact. vii. Cyber security: the software shall incorporate cybersecurity measures.																							
5.2.	REMOTE MONITORING & MAINTENANCE COMPUTER																							
(a)	Image analysis workstations for operator with high-resolution industrial grade monitors (suitable for 24/7 operation), secure data storage, and networking capability with following minimum specifications: <table><tr><td>Processor</td><td>Intel Core i7 13th Gen or equivalent</td></tr><tr><td>Motherboard</td><td>ATX, 4x DIMM Slots, 2x PCIe</td></tr><tr><td>Memory</td><td>16GB DDR5</td></tr><tr><td>Storage</td><td>512 GB NVMe M.2</td></tr><tr><td>GPU</td><td>Discreet, 04 GB GDDR4 VRAM, 04-display ports</td></tr><tr><td>Form Factor</td><td>Full Tower</td></tr><tr><td>Ports</td><td>02 x USB, 1 x HDMI/DP, 1 x RJ-45</td></tr><tr><td>Software</td><td>Lifetime licensed Window 11 Pro and MS Office Suite 2024 LTSC</td></tr><tr><td>Display</td><td>02 x Monitor (32-inch Widescreen)</td></tr><tr><td>PSU</td><td>220 VAC, 0.9 PF, Silver rated</td></tr></table>	Processor	Intel Core i7 13 th Gen or equivalent	Motherboard	ATX, 4x DIMM Slots, 2x PCIe	Memory	16GB DDR5	Storage	512 GB NVMe M.2	GPU	Discreet, 04 GB GDDR4 VRAM, 04-display ports	Form Factor	Full Tower	Ports	02 x USB, 1 x HDMI/DP, 1 x RJ-45	Software	Lifetime licensed Window 11 Pro and MS Office Suite 2024 LTSC	Display	02 x Monitor (32-inch Widescreen)	PSU	220 VAC, 0.9 PF, Silver rated	4		
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	<table><tr><td>Accessories</td><td>Wired Keyboard & Ergonomic Mouse, Cabling Kit, Power Cords etc. with each.</td></tr><tr><td>Operating System</td><td>Latest supported 64-bit Microsoft Windows Professional/Enterprise edition or OEM recommended OS</td></tr><tr><td>Processor</td><td>Intel Core i7 (13th Generation or later) / AMD Ryzen 7 (7000 Series or better)</td></tr><tr><td>Memory</td><td>Minimum 16 GB DDR5</td></tr><tr><td>Storage</td><td>Minimum 512 GB SSD</td></tr><tr><td>Display</td><td>Minimum 24-inch LED monitor, Full HD (1920 × 1080) resolution</td></tr><tr><td>Network Interface</td><td>Dual Gigabit Ethernet ports and Wi-Fi capability</td></tr><tr><td>USB Ports</td><td>Minimum four (04) USB 3.0 or higher ports</td></tr><tr><td>Graphics</td><td>Integrated or dedicated graphics supporting Full HD display</td></tr><tr><td>Power</td><td>UPS with minimum 30 minutes backup</td></tr><tr><td>Peripherals</td><td>Keyboard, mouse and all accessories required for operation of the management software</td></tr></table>	Accessories	Wired Keyboard & Ergonomic Mouse, Cabling Kit, Power Cords etc. with each.	Operating System	Latest supported 64-bit Microsoft Windows Professional/Enterprise edition or OEM recommended OS	Processor	Intel Core i7 (13th Generation or later) / AMD Ryzen 7 (7000 Series or better)	Memory	Minimum 16 GB DDR5	Storage	Minimum 512 GB SSD	Display	Minimum 24-inch LED monitor, Full HD (1920 × 1080) resolution	Network Interface	Dual Gigabit Ethernet ports and Wi-Fi capability	USB Ports	Minimum four (04) USB 3.0 or higher ports	Graphics	Integrated or dedicated graphics supporting Full HD display	Power	UPS with minimum 30 minutes backup	Peripherals	Keyboard, mouse and all accessories required for operation of the management software			
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(b)	The bidder shall provide dedicated workstations to be deployed for remote maintenance staff of PAA with centralized management software. The workstation shall have the following minimum specifications: <table><tr><td>Processor</td><td>Intel Core i7 13th Gen or equivalent</td></tr><tr><td>Motherboard</td><td>ATX, 4x DIMM Slots, 2x PCIe</td></tr><tr><td>Memory</td><td>16GB DDR5</td></tr><tr><td>Storage</td><td>512 GB NVMe M.2</td></tr><tr><td>GPU</td><td>Discreet, 04 GB GDDR4 VRAM, 04-display ports</td></tr><tr><td>Form Factor</td><td>Full Tower</td></tr><tr><td>Ports</td><td>02 x USB, 1 x HDMI/DP, 1 x RJ-45</td></tr><tr><td>Software</td><td>Lifetime licensed Window 11 Pro and MS Office Suite 2024 LTSC</td></tr><tr><td>Display</td><td>02 x Monitor (32-inch Widescreen)</td></tr><tr><td>PSU</td><td>220 VAC, 0.9 PF, Silver rated</td></tr><tr><td>Accessories</td><td>Wired Keyboard & Ergonomic Mouse, Cabling Kit, Power Cords etc. with each.</td></tr></table> The workstation shall be fully compatible with the supplied centralized management software and shall support monitoring, reporting, database management, software updates and administration of all Hand Baggage units deployed under the contract	Processor	Intel Core i7 13 th Gen or equivalent	Motherboard	ATX, 4x DIMM Slots, 2x PCIe	Memory	16GB DDR5	Storage	512 GB NVMe M.2	GPU	Discreet, 04 GB GDDR4 VRAM, 04-display ports	Form Factor	Full Tower	Ports	02 x USB, 1 x HDMI/DP, 1 x RJ-45	Software	Lifetime licensed Window 11 Pro and MS Office Suite 2024 LTSC	Display	02 x Monitor (32-inch Widescreen)	PSU	220 VAC, 0.9 PF, Silver rated	Accessories	Wired Keyboard & Ergonomic Mouse, Cabling Kit, Power Cords etc. with each.	1		
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(c)	The bidder shall provide the Remote Maintenance Kit (Laptop) , pre-installed and stored with all the applications, software, drivers, licenses necessary for the remote management, maintenance of quoted machines, with the following or higher specifications: <table><tr><td>Processor</td><td>Intel Core Ultra 7 or higher</td></tr><tr><td>Storage</td><td>1 TB NVME</td></tr><tr><td>Memory</td><td>16GB DDR5</td></tr><tr><td>Display</td><td>16-inch, FHD Resolution or higher</td></tr><tr><td>Keyboard</td><td>Backlit</td></tr><tr><td>Battery</td><td>60 WHr or higher</td></tr><tr><td>Wireless</td><td>Wi-Fi 6 and Bluetooth 5.0</td></tr><tr><td>Camera</td><td>Built-in, FHD or better</td></tr><tr><td>Ports</td><td>02 x USB-A, 01x USB-C, 1 x HDMI Out, 1 x RJ-45</td></tr><tr><td>Accessories</td><td>Carry-Case and Power Adapter etc.</td></tr></table>	Processor	Intel Core Ultra 7 or higher	Storage	1 TB NVME	Memory	16GB DDR5	Display	16-inch, FHD Resolution or higher	Keyboard	Backlit	Battery	60 WHr or higher	Wireless	Wi-Fi 6 and Bluetooth 5.0	Camera	Built-in, FHD or better	Ports	02 x USB-A, 01x USB-C, 1 x HDMI Out, 1 x RJ-45	Accessories	Carry-Case and Power Adapter etc.	1				
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6.	Parallel Remote Viewing																									
6.1.	The system shall provide a read-only parallel remote viewing facility for authorized Customs personnel to monitor screening images in real time. The remote viewing station shall have no operational control over the screening equipment or its functions.																									
7.	UPS																									
7.1.	The bidder shall provide the following or higher specifications for the UPS: <table><tr><td>Type</td><td>Pure Sinewave, True Online, Double conversion</td></tr><tr><td>VA Rating</td><td>Adequate so as total load shall not exceed 70% of actual capacity of UPS</td></tr><tr><td>Input</td><td>110 – 230 VAC</td></tr><tr><td>Output</td><td>220 - 240 VAC</td></tr><tr><td>AVR</td><td>Built-in</td></tr><tr><td>Protection</td><td>Under-voltage & Over-voltage, Frequency Fluctuation (40-60 Hz), Low battery, overload, over temperature, short circuit, over voltage, battery over charge & over discharge.</td></tr><tr><td>Power Factor</td><td>> 0.99 PF</td></tr><tr><td>Transfer Time</td><td>0 ms</td></tr><tr><td>Management</td><td>At Maintenance Workstation via SNMP</td></tr><tr><td>Battery</td><td>Built-in or External (at least 15 minutes of backup time at full load)</td></tr><tr><td>Accessories</td><td>Maintenance / Service Bypass Panels, and Power Cords etc.</td></tr></table>	Type	Pure Sinewave, True Online, Double conversion	VA Rating	Adequate so as total load shall not exceed 70% of actual capacity of UPS	Input	110 – 230 VAC	Output	220 - 240 VAC	AVR	Built-in	Protection	Under-voltage & Over-voltage, Frequency Fluctuation (40-60 Hz), Low battery, overload, over temperature, short circuit, over voltage, battery over charge & over discharge.	Power Factor	> 0.99 PF	Transfer Time	0 ms	Management	At Maintenance Workstation via SNMP	Battery	Built-in or External (at least 15 minutes of backup time at full load)	Accessories	Maintenance / Service Bypass Panels, and Power Cords etc.	1		
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