

HEADQUARTERS, PAKISTAN AIRPORTS AUTHORITY
(Telecom & Electronics Branch)

AdID Logistics (ANS)
HQPAA

ADDENDUM
I/T NO. HQPAA/1992/368/XXLN
PROCUREMENT OF HAND BAGGAGE CT SCANNING MACHINES FOR
PAA AIRPORTS

1. It is intimated that the following transformations in subject noted I/T have been made which need to be complied by all bidders.

FOR:

4	<u>TECHNICAL SPECIFICATIONS (Page 71 of 129)</u>
4.6	Deployment Method: Standalone with TRS. TRS length to be assessed during site survey by bidder in coordination with PAA and ASF.
5	<u>CENTRALIZED MANAGEMENT SOFTWARE (Page 70 of 129)</u>
5.1	Centralized, network-compatible management software capable of monitoring, analyzing, managing, configuring and reporting all deployed 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. Integration: capability to interface with other airport screening equipment through industry standard communication interfaces or API, where required by PAA. 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	<u>REMOTE MONITORING & MAINTENANCE COMPUTER (Page 71 of 129)</u>
a)	The bidder shall provide dedicated workstations to be deployed at: i. Screening rooms at IIAP, JIAP and AllAP (Qty- 3) for monitoring by operational staff and ii. JIAP, AllAP, IIAP and EED (Qty-4) for installation and operation of the centralized management software. The workstation shall have the following minimum specifications:

	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
	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.	
b)	The bidder shall provide the Remote Maintenance Kit (Laptop) to be provided at IIAP, JIAP, AllAP and EED, pre-installed and stored with all the applications, software, drivers, licenses necessary for the remote management, maintenance of quoted Hand Baggage machines.	
6.	<u>PARALLEL REMOTE VIEWING</u>	
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.	
	<u>ADDITIONAL BID DATA SHEET (BDS) (PAGE 81 OF 129)</u>	
01	d) Delivery period: FAT, Training, Delivery, Installation & Commissioning within 90 days after signing of contract. Delivery / installation at JIAP, AllAP and IIAP.	
	<u>BID SECURITY (PAGE 30 OF 129)</u>	
BDS 6	BDS Clause Number 11 ITB Number 18. Bid Security Amount PKR 66,360,000	

READ:

<u>4</u>	<u>TECHNICAL SPECIFICATIONS (Page 71 of 129)</u>
4.6	a) The required Tray Return System (TRS) shall be Fully Automated Tray Return System. b) The Bidder shall design and supply an Automated Tray Return System (ATRS), integrated with the CT screening equipment, capable of achieving a minimum sustained throughput of 250–300 passengers per hour (PPH) per lane at JIAP Karachi and AllAP Lahore, within the available lane length of 15 (fifteen) meters with 3 (three) parallel divest positions, and 350–400 PPH per lane at IIAP Islamabad, within the available lane length of 18 (eighteen) meters with 4 (four) parallel divest positions, under normal operational conditions. The proposed configuration shall provide the specified number of parallel divest positions, optimally arranged along with the incline/infeed module, CT scanner, diverter, and reclaim/redress zone, to eliminate divest-side bottlenecks and sustain the specified throughput without operator-induced delays. The system shall incorporate empty tray verification and automatic recirculation to maintain continuous tray flow and prevent starvation at the divest end and shall be modular and expandable

to allow future addition of divest positions or reconfiguration without requiring replacement of the complete lane.

- c) As part of the technical proposal, the Bidder shall submit, separately for each airport, a detailed, to-scale lane layout drawing confirming that the complete configuration — divest positions, infeed, CT scanner, diverter, and reclaim zone — fits within the specified lane length for that airport (15 meters at JIAP Karachi and AllAP Lahore; 18 meters at IIAP Islamabad), along with throughput calculations or simulation data substantiating how the proposed number of divest positions, belt speed, and CT scanner cycle time collectively achieve the 250–300 PPH target (JIAP Karachi, AllAP Lahore) or 350–400 PPH target (IIAP Islamabad) as applicable, including the assumed bag-to-passenger ratio used to derive PPH from bag/tray throughput. The Bidder shall further provide OEM certification or datasheet confirming the rated throughput of the proposed ATRS model, along with reference to at least one operational airport installation of comparable configuration and throughput.

CENTRALIZED IMAGE PROCESSING (CIP) ARCHITECTURE

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- a) The CIP system shall use a secure, client-server, network-based architecture that decouples CT image acquisition from centralized image analysis and review. The system shall provide centralized processing, management, monitoring and review of CT images generated by the Hand Baggage CT Scanning Machines.
- b) A dedicated and independent CIP system shall be provided at each designated airport, with each airport's CIP system serving only the CT screening machines installed at that respective airport and not linked with other airport.
- c) The airport-wise configuration shall be as follows:

Airport	CT Machines	PV S	LW S	SV S	CIP System
JIAP Karachi	04	06	04	04	01 Independent CIP (Main / Standby Configuration)
AllAP Lahore	04	06	04	04	01 Independent CIP (Main / Standby Configuration)
IIAP Islamabad	04	06	04	04	01 Independent CIP (Main / Standby Configuration)
Total	12	18	12	12	03 Independent CIP Systems

5.1

- d) At each airport, the CIP system shall comprise all necessary **CIP application servers, standby/failover servers, storage, PVS stations, LWS stations, SVS stations, dedicated screening network, network switches, software, licenses, interfaces and associated infrastructure** required for complete operation of the four (04) CT screening machines installed at each airport.
- e) Each airport-level CIP system shall be capable of independently performing centralized CT image processing, image review, examination queuing, screening decision management, monitoring, archiving, reporting, audit-trail management and other functions specified in this RFP.
- f) The **four (04) CT machines at each airport shall be connected to the respective airport's CIP system.**
- g) The CIP architecture at each airport shall comprise **six (06) Primary Viewing Stations (PVS)** serving the respective four (04) CT machines. All six (06) PVS operators shall be capable of reviewing

CT examinations generated by **any of the four (04) CT machines connected to that airport's CIP system.**

- h) The system shall provide an automated **next-available-operator queuing mechanism**, whereby CT examinations generated by any connected CT lane shall be automatically routed to the next available authorized PVS operator for image review, analysis and screening decision.
- i) The system shall therefore support a **4 CT: 6 PVS configuration** at each airport and shall not require a permanent one-to-one assignment between a PVS and a particular CT machine.
- j) Each CT machine shall be provided with a dedicated **Local Workstation (LWS)** capable of independent operation in accordance with Clause 5.3. In the event of failure or unavailability of the respective airport's centralized CIP server, CIP application, network or CT-to-CIP connectivity, the affected CT machine shall automatically transfer to its dedicated LWS to maintain screening operations.
- k) The system shall also provide **one (01) Secondary View Station (SVS) with each CT machine**. The SVS shall be fully integrated with the respective CT machine and the airport-level CIP system and shall be used for **secondary review and detailed analysis of suspect/alarmed baggage** identified during primary screening.
- l) Each SVS shall receive/access the relevant suspect/alarmed CT examination together with its associated tray/bag identification, CT machine/lane identification and examination information. The SVS shall provide the authorized secondary screener/supervisor with the required, image-manipulation and threat-assessment functions supported by the proposed CT/CIP system.
- m) The SVS shall remain associated with its respective CT machine.
- n) The bidder shall submit separate detailed architecture and data-flow diagrams for **JIAP Karachi, AllAP Lahore and IIAP Islamabad**, showing, as a minimum:
 - Four (04) CT machines;
 - Six (06) PVS stations;
 - Four (04) dedicated LWS;
 - Four (04) SVS stations;
 - Primary CIP server;
 - Standby/failover CIP server;
 - Centralized storage;
 - Dedicated screening network (to be deployed by successful bidder
 - Network switches;
 - Firewall/segmentation/security components;
 - Relevant BHS/diverter interfaces.

5.2	REDUNDANT CIP ARCHITECTURE AND FAILOVER
	The CIP system at each airport shall comprise a Primary CIP Server and Standby/Failover Server to ensure redundancy and continuous availability. Automatic failover shall be provided upon Primary Server failure, with preservation and synchronization of CT images, screening decisions, examination data and audit records. <u>Local Workstation and Local/Automatic Mode</u> Each CT machine shall have a dedicated LWS for independent screening operation during CIP/server/network or CT-to-CIP communication failure. a) Under normal conditions, CT images shall be routed through the CIP system to the PVS. Authorized personnel shall also be able to select PVS/Centralized Mode or LWS/Local Mode. Upon centralized CIP/PVS failure, the affected CT shall automatically switch to its dedicated LWS to maintain screening continuity. The LWS shall support image review, analysis, screening decision and annotation. Upon restoration, locally generated images, decisions and audit records shall automatically synchronize with the CIP system without loss or duplication.
	b) The bidder shall provide the Remote Maintenance Kit (Laptop) to be provided at IIAP, JIAP, AIIAP & (T&E HQPAA) pre-installed and stored with all the applications, software, drivers, licenses necessary for the remote management, maintenance of quoted Hand Baggage machines. (Qty.04).
6.	<u>PARALLEL REMOTE VIEWING</u>
6.1	To be deleted
	<u>ADDITIONAL BID DATA SHEET (BDS) (PAGE 81 OF 129)</u>
01	d) Delivery period: FAT, Training, Delivery, Installation & Commissioning within 120 days after signing of contract. Delivery / installation at JIAP, AIIAP and IIAP.
	<u>BID SECURITY (PAGE 30 OF 129)</u>
BDS 6	BDS Clause Number 11 ITB Number 18. Bid Security Amount PKR 33,180,000

2.The following additional clauses shall be added to the RFP:

2.2	The bidder shall provide an OEM-recommended solution for integration of the CIP system with the associated CCTV/VMS, enabling correlation of tray/bag identifiers with the relevant CT screening/recheck event and retrieval of corresponding footage. All necessary integration components shall be included.
4.13	Standard Features 3D volumetric CT images - Multi-view / 360° rotatable images - EDS and LEDS capability - Automatic threat detection algorithm - Organic / inorganic discrimination - Threat Image Projection - External image archiving - Date and time display - Image retrieval - Operator user ID - Operator training system module
4.14	Additional requirements - Explosives and liquid explosives detection - Weapon detection (Optional) - Currency detection(Optional) - Narcotics detection(Optional)
5.3	MINIMUM HARDWARE SPECIFICATIONS
	The bidder shall provide complete enterprise-grade hardware required for the CIP system at each airport. All hardware shall be OEM-approved, fully compatible with the proposed CT/CIP solution and appropriately sized for the specified workload. a) Primary & Standby/Failover CIP Servers Each airport shall be provided with one (01) Primary CIP Server and one (01) Standby/Failover CIP Server, or equivalent enterprise-grade redundant architecture, with minimum: - Enterprise-grade processor with minimum 16 physical cores or better. - Minimum 128 GB ECC RAM, expandable as required. - Enterprise SSDs with RAID-1 or equivalent redundancy. - Hardware RAID controller with cache protection. - Minimum 2 × 10 GbE network interfaces. - Dual hot-swappable redundant power supplies. - Dedicated remote server management facility. - Rack-mountable enterprise configuration. b) Centralized Storage - Dedicated enterprise-grade centralized storage shall be provided for CT images, examination data, screening decisions and audit records.

- The storage system shall provide **minimum six (06) months online retention of CT screening images** generated by all four (04) CT machines at each airport.
- Storage capacity shall be **calculated and proposed by the bidder/OEM** based on the actual image generation rate and operational workload of the proposed CT system.
- RAID-protected storage with appropriate redundancy shall be provided.
- Storage shall be scalable for future expansion.

c) PVS, LWS & SVS Workstations

All workstations shall be OEM-approved and suitable for CT image review, processing and analysis, with minimum:

- Intel Core i7/ 13th Generation or better.
- Minimum 32 GB DDR5 RAM.
- Minimum 1 TB SSD.
- Minimum 24-inch Full HD display.
- Dedicated/professional GPU suitable for CT image visualization.
- Minimum Gigabit Ethernet interface.
- USB 3.0 or higher ports as required.
- UPS with minimum 30 minutes backup.
- Keyboard, mouse and required accessories.

d) System Performance & OEM Sizing

The proposed hardware shall support simultaneous operation of four (04) CT machines, four (06) PVS, four (04) LWS and four (04) SVS at each airport, including image processing, review, archiving, reporting and audit-trail functions.

Where the OEM/CIP software requires higher specifications, the bidder shall provide the higher configuration without additional cost to PAA.

3. All other terms & conditions will remain the same.


(Engr. MAROOF SHAH)
 AdID T&E HQPAA

L. M No. HQPAA/1992/368/XXLN

Dated: - 25th August, 2026