

Technical specifications

[This table will be completed by the bidder in columns 2, 3, 4, 6, 7, and by the contracting authority – in columns 1, 5,]

Procurement procedure number OCs-b3wdp1-MD-1751977966815
Object of the acquisition: Automated Border Control System Border Control, ABC, and Gate)

Name goods/services	Model name of the good/service	The Land of origin	Manufacturer	Full technical specification requested by the contracting authority	Full technical specification proposed by the bidder	Standards Reference
1	2	3	4	5	6	7
Automated Border Control (Automated Border Control, ABC, e-Gate)	SITA	Germany	SITA Advanced Travel Solutions Limited	Device for automatic reading of the entire data page of the biometric travel document, without removable parts, intended for reading data from: mechanolyzable area (MRZ); visual area (VZ); electronic wireless identification circuit (RFID); barcode, comparison of read data, verification of the authenticity of the travel document by the possibility of scanning the data page under different light spectrums (White, IR, UF, coaxial, OVD, other). Optical document reader Scanning area — the entire passport page; Video sensor type — CMOS; Color representation — RGB Color depth — 24 bits	The Document Reader is capable of automatic, full-page scanning of biometric travel documents. Fully supported: reads MRZ, visual zone, RFID, barcodes; supports data comparison and multi-spectrum imaging for authenticity verification Supports full-page scanning Video Sensor Type: CMOS 10MP Colour Representation: 36-bit RGB Colour depth: 36 bits	ICAO 9303

				<p>The number of megapixels - 18, with the ability to set values from a list. The list must contain at least 3 values contained in 1..5, 5..10, 10..18;</p> <p>Contactless Identification Electronic Circuit Reader: Standards — ISO 14443: A and B for RFID-electronic circuits; Speed of information exchange — 106, 212, 424, 848 Kbaud Reading of electronic circuits – RFID located in any part of the travel document Anti-collision: detection/reading of the RFID electronic circuit after mechanolyzable area (MRZ) reading Reading and processing the image of format documents: ID-1, ID-2, ID-3 and other documents not exceeding the dimensions of 88x128 mm; Scanning process: Determination of the existence in the document reader device by sensor Automatic scanning of the document after the document has been detected; Removing Lights of reflection (glow) from laminate and holograms for the white and infrared light spectrum; Compensation of outdoor light exposure to image capture (photography) in the ultraviolet light spectrum (Smart UV); Automatic selection of ultraviolet illumination intensity for the type of documents processed; Determining (searching) and selecting images (photo, MRZ area, signature, data fields) from the total image of the document.</p>	<p>Megapixels: 10 MP fixed CMOS sensor; high-resolution capture scalable to 700 dpi Contactless Identification Electronic Circuit Reader: RFID Speed of Information exchange: 106, 212, 424, 848 Kbaud supported. Full-page RFID reading supported(no position restriction mentioned). Anti-collision (Post-MRZ Reading): Supported; the reader accurately detects and reads the correct RFID chip after capturing MRZ data. Reading and processing the image of format documents: Supports ID-1, ID-2, ID-3; documents up to 88×128 mm scannable with proper positioning. The Document Reader supports automatic document detection and initiates scanning immediately upon placement. It removes reflections from laminates and holograms under both white and infrared lighting. The device compensates for outdoor light during UV image capture using built-in UV illumination. Automatic UV intensity adjustment according to document type is supported to an extent. The reader also identifies and extracts key zones such as the photo, MRZ, signature, and data fields from the full document image.</p>	<p>Electronic Circuit Reader: MRZ Reading: Supported per ICAO 9303 RFID Reader Standard: ISO 14443 A & B supported</p>
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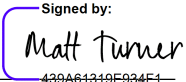
				<p>Mechanolizable Zone (MRZ) Supported mechanizable area (MRZ) formats in accordance with ICAO 9303s standard. Search for the mechanolizable area on the document image; Recognition in the white and infrared light spectrum; Verification of the control figures aimed at verifying the correctness of the completion of the mechanizable area in accordance with the requirements of ICAO 9303. Evaluation of correctness and print quality, in accordance with ICAO 9303 and ISO 7501, 1831, 1073-2 standards.</p> <p>Barcode reading: Formats maintained: 1D: Codabar, Code39 (+extended), Code93, Code128, EAN-8, EAN-13, IATA 2 of 5 (Airline), Interleaved 2 of 5 (ITF), Matrix 2 of 5, STF (Industrial), UPC-A, UPC-E 2D: PDF417, Aztec Code, QR Code, Datamatrix</p> <p>Determination automatic document type Document Type Determination Sequence Country→Type→Series Receive the template from the SDK database Document For further processing: - placement of textual and graphic fields; - the existence of barcodes and protective elements; - verifying its authenticity and parameters; - existence of electronic circuits – RFID.</p> <p>RFID SDK/Functionality</p>	<p>Supports MRZ reading compliant with ICAO 9303 formats. Automatically detects and locates the MRZ area within the document image.</p> <p>Performs MRZ recognition using both white and infrared lighting. Verifies MRZ control digits to ensure data accuracy as per ICAO 9303 requirements. Evaluates MRZ print quality and correctness following ICAO 9303 and relevant ISO standards.</p> <p>Barcode reading: 1D: Supports Code128, Code39, EAN-8, EAN-13, IATA 2 of 5 (Airline), Interleaved 2 of 5, Matrix 2 of 5, UPC-A, UPC-E; no explicit mention of Codabar and Code93. Support 2D barcode formats: PDF417, Aztec Code, QR Code, Datamatrix</p> <p>Determination automatic document type Supported via SDK which provides templates and enables placement, barcode and security element detection, and authenticity verification for further processing.</p>	<p>ICAO 9303</p> <p>ICAO 9303</p> <p>Industry standard 1D barcode formats</p> <p>Industry standard 2D barcode formats</p>
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				<p>Accepted standards for electronic circuits</p> <ul style="list-style-type: none"> - RFID: - ISO/IEC 14443-2 (Type A and B) - ISO/IEC 14443-4 <p>Data access regime: Direct, BAC, EAC, PEACE</p> <p>Authentication: Active (AA) Passive (PA) Electronic Circuit (CA v1, CA v2) Terminal (TA v1, TA v2)</p> <p>Application support: ePassport (DG1 – DG16), eID (DG1 – DG21), eSign;</p> <p>Certificate Management:</p> <p>Local storage;</p> <p>Obtaining certificates online through the software interface;</p> <p>Master List Support, CRL</p> <p>Reading with Extended Length Support</p> <p>Reading of non-contact electronic circuits according to ICAO data formats LDS 1.7, PKI 1.1</p> <p>Functionality Mandatory required security requirements:</p> <ul style="list-style-type: none"> - Full tailgating detection functionality (without additional camera on top), based on artificial intelligence integrated into the vision system. - Radar sensors integrated into the bottom for scanning door areas. - Complete modularity of hardware equipment for single-row or multi-row gate configuration. - Power on/off function with hidden switch (key). 	<p>Data Access Modes: BAC, EAC v1/v2, PACE-CAM supported</p> <p>Authentication Types: All supported: Passive/Active Auth, CA v1/v2, TA v1/v2 via SDK</p> <p>Application support: Supports ePassport (DG1 – DG16), Supports eID (DG1 – DG16), Partial support for (DG17-DG21) esign: Supported indirectly via OCR and image capture enabling authentication and verification</p> <p>Certificate Management: Supported full certificate management including local storage, online certificate retrieval via software interface, Master List and CRL support, and extended length reading of non-contact electronic circuits.</p> <p>Functionality Mandatory required security requirements: Full Tailgating detection is achieved through integrated sensors within the system. Sensors positioned at the bottom scan the door areas to ensure secure access. The hardware is modular for single-row or multi-row gate configurations. Power on/off is controlled via a hidden key switch for security.</p>	<ul style="list-style-type: none"> - ISO/IEC 14443-2 (Type A and B) - ISO/IEC 14443-4 <p>ePassport: ICAO 9303 LDS 1.7 & 1.8 eID: ISO/IEC 18013 parts 2 & 3</p> <p>Certificate Management: -ICAO LDS 1.7 -PKI 1.1 ICAO 9303</p>
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			<ul style="list-style-type: none"> - In case of failure of identity verification: the possibility of configuring the behaviour of the system – either the person is forced to leave the gate or is detained until release by an officer. - The possibility of releasing the person by key switch (distinct for each line) or by means of the border control software. Analysis and comparison of textual information <p>Areas of the document whose data will be analysed (compared):</p> <ul style="list-style-type: none"> - Mechanolizable area - visual area - RFID Electronic Circuit <p>Authenticity check</p> <ul style="list-style-type: none"> - luminescence check (UV Dull Paper): bench, MRZ area, photo placement area; - MRZ print contrast verification according to ICAO 9303 standard (IR B900 Ink) <p>Checks available after determining the document type:</p> <ul style="list-style-type: none"> - checking drawings of certain colours and shapes in the white, infrared and ultraviolet light spectrum (Image Pattern); - checking the illumination of fibres of a certain colour and size (UV Protection Fibers) - Checking for False Luminescence - Checking the photo application method: print or paste (Photo Embedding Type) <p>Infrared Visibility (IR Visibility) check: - blank elements</p>	<ul style="list-style-type: none"> -The system allows configurable actions on identity verification failure: either automatic ejection from the gate or detention until officer intervention. -Release can be controlled through the monitoring station software. <p>Analysis and comparison of textual information:</p> <p>All supported via SDK – MRZ, visual area , RFID compared</p> <p>Authenticity check</p> <ul style="list-style-type: none"> -Supports luminescence checks including UV inspection of the document surface and key areas like MRZ and photo. -Performs MRZ print contrast verification using near-infrared illumination compliant with ICAO 9303. <p>Checks available after determining the document type:</p> <ul style="list-style-type: none"> -Supports inspection of specific colour patterns and shapes under white, infrared, and ultraviolet light. -Detects UV protection fibers within documents. -Includes false luminescence detection capabilities. <p>Photo Embedding Type: Print vs. paste detection</p> <p>Supported through image and layer analysis to distinguish print versus paste photo application using the SDK.</p>	<ul style="list-style-type: none"> - ICAO 9303 standard (IR B900 Ink)
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				<ul style="list-style-type: none"> - textual data - photography (basic and additional) - checking for holograms (OVD) - Reading Text luminescent an comparison with the data read from the area mechanolyzable MRZ or visual area VIZ (OCR Security Text) - Hidden Image Viewing (IPI) — Invisible Personal Information) - Retroreflective protection check - checking the barcode format. 	<p>Security Text: Supported ; OCR and luminescence comparison possible via SDK</p> <p>Infrared Visibility Check: IR visibility of blanks, text, photos, holograms</p> <p>Supported via infrared spectrum imaging and SDK detection of security elements like blanks, text, photos, and holograms.</p>	
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Signed and stamp: _____

Signed by:  439A61319E934F1...

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As: Authorised Signatory

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Date of completion: 21st Aug 2025