

Technical Specifications

Annex II to the Invitation to Tender

Frontex/OP/327/2020/KM

Purchase of multifunctional scanning peripherals

Lot 1 - Portable desktop or mobile (in a suitcase) fingerprint scanner device

Lot 2 - Portable desktop or mobile (in a suitcase) document inspection and fingerprint scanner device

1. Acronyms and Definitions	3
2. Introduction to Frontex	4
3. General Information	5
3.1. Aim of the document	5
3.2. Target Situation	5
4. Scope of the FWC and Lots	6
5. Minimal technical requirements	7
5.1. Lot 1 - Portable desktop or mobile (in a suitcase) fingerprint scanner device	7
5.1.1. Definition	7
5.1.2. Description of use	7
5.1.3. Requirements - Fingerprint scanner	7
5.2. Lot 2 - Portable desktop or mobile (in a suitcase) document inspection and fingerprint scanner device	11
5.2.1. Definition	11
5.2.2. Description of use	11
5.2.3. Requirements - Document inspection and fingerprint scanner (two in one)	11
6. Delivery, training, warranty and maintenance	22
6.1. Delivery	22
6.2. Training and manuals	22
6.3. Warranty and maintenance	22
7. Quality monitoring and acceptance procedures	23
7.1. Quality control procedure	23
7.2. Acceptance procedure	23
8. Implementation of FWC	24
8.1. Indicative implementation plan for the FWC	24
8.2. Language	24
8.3. Contract management personnel	24
8.3.1. Contractor's personnel	24
8.3.2. Frontex personnel	24

1. Acronyms and Definitions

Acronym	Definition
BAC	Basic Access Control
CM	Contract Manager
DDP	Delivery Duty Paid (incoterms)
EAC	Extended Access Control
EBCG	European Border and Coast Guard
EU	European Union
ETIAS	European Travel Information and Authorization System
FCM	Frontex Contract Manager
FWC	Framework Contract
ICAO	International Civil Aviation Organization
IPI	Invisible Personal Information
IR	InfraRed
LED	Light Emitting Diode
M	Mandatory
MRTD	Machine Readable Travel Documents
MRZ	Machine Readable Zone
MS	A Member State of the European Union
NFC	Near Field Communication
NIST	National Institute of Standards and Technology
NTWG	New Technologies Working Group
O	Optional
OCR	Optical Character Recognition
OVD	Optically Variable Device
RFID	Radio Frequency Identification
SAC	Schengen Associated Country
SIS	Schengen Information System (currently 2nd generation - SIS II)
SO/SOs	Specific Order/Specific Orders
TS	Tender Specifications
USB	Universal Serial Bus
UV	Ultra Violet
VIZ	Visual Inspection Zone

2. Introduction to Frontex

The European Border and Coast Guard Agency - Frontex (hereinafter referred to as “Frontex”) functions under the mandate of the Council Regulation (EC) Regulation (EU) 2019/1896 with a view to improve the integrated management of the external borders of the Member States of the European Union.

The Regulation (EU) 1896/2019 lays down in Article 10 that the Agency shall contribute to an efficient, high and uniform level of border control and return including by setting up a technical equipment pool to be deployed in joint operations, rapid border interventions and in the framework of migration management support teams, as well as in return operations and return interventions.

Further information about Frontex origin, organisation, its mandate, fields of activities, strategy and planned activities can be read on the Agency’s web site: www.frontex.europa.eu

3. General Information

3.1. Aim of the document

This document defines the terms and conditions to procure different types of document inspection and fingerprint scanner equipment. It describes the minimum requirements for the requested devices and it ensures that the delivered goods comply with Frontex requirements.

These Terms of References shall become an integral part of the contract that may be awarded as a result of this open tender procedure.

All information delivered in this document, its annexes and other referred documents shall be taken into consideration by the Tenderers in preparation of the offer and by the Contractor during the contract's implementation.

3.2. Target Situation

In order to achieve the optimal technical equipment availability Frontex is looking to establish a FWC for purchasing of different types of document inspection and fingerprint scanner equipment. The overall duration of the FWC shall be limited to four (4) years.

The possible quantity of equipment to be ordered during the lifetime of the contract is estimated to be as follows:

	Lot 1	Lot 2
1st year:	30	30
2nd year:	280	150
3rd year:	20	50
4th year:	20	30

The information given in #3.2. of this document is indicative and cannot be considered as automatically constituting any form of commitment by Frontex.

4. Scope of the FWC and Lots

The objective of this FWC is to provide Frontex with the capacity to obtain different quantities of any type of equipment, as listed below each time the need arises according to the terms and conditions described in the tender documentation.

The tender is divided into 2 lots per type of equipment needed, as follows:

- Lot 1 - Portable desktop or mobile (in a suitcase) fingerprint scanner device
- Lot 2 - Portable desktop or mobile (in a suitcase) document inspection and fingerprint scanner device

5. Minimal technical requirements

5.1. Lot 1 - Portable desktop or mobile (in a suitcase) fingerprint scanner device

5.1.1. Definition

Portable desktop or mobile (in a suitcase) fingerprint scanner device composed of a Tenprint fingers (1x4, 4x1, 1x2, 2x1, 2x2 scanning method) scanner and software capable to perform fingerprint scanning and recording at all types of environments.

5.1.2. Description of use

The equipment has to have capability to be used with computer/laptop.

Although portable and capable to be powered by battery for some time, the equipment is for the use in a stationary mode on a desk where access to AC is generally available for instance for checks in first line booths, in temporary offices/containers such as at hotspots and checkpoints for first or second line indoor comprehensive optical, electronic, and combined checks.

Images and information of fingerprints as well as metadata related to the inspection may be automatically anonymized and saved for further processing for instance for producing alerts or forwarding information to other posts and experts.

The use of a computer together with the equipment is required for processing of captured information and images. This capability is mandatory.

5.1.3. Requirements - Fingerprint scanner

The fingerprint scanner shall fulfil the FBI IAFIS Image Quality Specifications Appendix F certification. The following requirements are compliant with these de-facto standards:

REQ NR	Component	Parameter	Requirement (describe functionality)	M/O
req-1	General	Compliance	Full compliance with FBI IAFIS IQS Appendix F	M
req-2	General	Compliance	Compliance with ISO/IEC 19784-1:2018 requirements	M
req-3	General	Compliance	Compliance with ISO/IEC 19794-4:2011 requirements	M
req-4	General	Compliance	Compliance to IDENT requirements	M
req-5	General	Compliance	Compliance to DHS requirements	M
req-6	General	Compliance	FCC, CE, RoHS	M
req-7	Scanning Module	Scan Capabilities	Available of Tenprint fingerprint scanning in 1x4, 4x1, 1x2, 2x1, 2x2 scanning method	M
req-8	Scanning Module	Scan Capabilities	Settings of fingerprint scanning shall be flexible	M
req-9	Scanning Module	Scan Capabilities	Finger roll support	M
req-10	Scanning Module	Scan Capabilities	Automatic scan support	M

REQ NR	Component	Parameter	Requirement (describe functionality)	M/O
req-11	Scanning Module	Scan Time	Scanning of 4 fingerprint (1x4) within 5s	M
req-12	Scanning Area	Image quality	Capture all areas with the same quality	M
req-13	Camera	Image resolution	≥ 500 dpi	M
req-14	Camera		Possibility to manually adjust exposure	O
req-15	Camera	Colour depth	Minimum 256 greyscale (8 bit), in accordance with the ANSI/NIST-ITL 1-2011 Update 2015 standard or newer version	M
req-16	Camera	Image formats	BMP, JPEG, WSQ, with FBI certificated WSQ compression (ISO/IEC 19794 or ISO/IEC 15444-1)	M
req-17	Camera	Image quality	constant – uniform	M
req-18	Software features	Quality management algorithm	NIST NFIQ 2.0 or newer	M
req-19	Software features	Operating software support/compatibility	Windows 10 or higher 64 bit OS	M
req-20	Software features	Operating software support/compatibility	Mac OS, Linux (or Android, iOS)	O
req-21	Software features	Operating software support/compatibility	WebAPI enabling access to device from Web Browser, using JavaScript	M
req-22	Software features	Firmware upgrade	via USB, automatic	M
req-23	Software features	SDK and libraries	Programming languages: C/C++, C#, VB.NET, Java Libraries: Windows DLL	M
req-24	Software features	Saving	Printouts shall be pasted in FBI EFTS, FBI EBTS, IAFIS, XML/http, e-mail transactions	M
req-25	Display of information	Results	Fingerprint Liveness Detection	M
req-26	Display of information	Results	Proceeded check overall result (quality of images)	O
req-27	Display of information	Results	Busy mode	O
req-28	Display of information	Results	Stand by mode	O
req-29	Hardware	Device size	portable by one person in a suitcase	M
req-30	Hardware	Device weight	max 5 kg	M
req-31	Hardware	Device cover	metal	O
req-32	Hardware	Device surface	scratch resistant scanner surface	M

REQ NR	Component	Parameter	Requirement (describe functionality)	M/O
req-33	Hardware	Resistency	Water resistant min. IP53	M
req-34	Hardware	Resistency	Dust resistant min. IP53	M
req-35	Hardware	Robustness	Drop from min 1m	M
req-36	Hardware	Robustness	Minimum operation temperature is between 5C° and +45C°	M
req-37	Hardware	Robustness	Minimum storage temperature is between -20C° and +50C°	M
req-38	Hardware	Robustness	Minimum operating humidity is between 10% and 90%	M
req-39	Power Supply		AC (100-240V)	M
req-40	Power Supply	Battery	integrated - rechargeable via USB or AC	M
req-41	Network		connectivity (intranet or any LAN)	O
req-42	Other features and accessories		Possibility to add a document reader	O
req-43	Other features and accessories		Possibility to add a camera to capture photos of the person	O
req-44	Other features and accessories	USB port	Type A USB connection 2.0 or higher ensuring speed data transfer	M
req-45	Other features and accessories	Usability	simple and straightforward to operate without extensive technical training, device has to be self-sufficient and be fully functional without connectivity to the external resources	M
req-46	Other features and accessories	Usability	Allow single-handed operation	O
req-47	Other features and accessories	Usability	Provide interactive user-guidance	O
req-48	Other features and accessories	Usability	Guide operators through multi-page verification	O
req-49	Other features and accessories	Usability	Fast and easy capture of wet, dry and dirty fingers	M
req-50	Other features and accessories	Maintenance	Service level agreement on minimum maintenance (hardware and software), max 24 hrs to react, 1 week to fix or replace	M
req-51	Other features and accessories	Warranty	Full replacement [within a week] if DOA, warranty for at least 3 years	M
req-52	Other features and accessories	Training	1/2 day train the trainer course	M

REQ NR	Component	Parameter	Requirement (describe functionality)	M/O
req-53	Other features and accessories	Training	Training materials (tutorials and manuals) for trainers (in pdf) min in English	M
req-54	Other features and accessories	Manual for operation	min English	M
req-55	Other features and accessories	cover/protection		M
req-56	Other features and accessories	carry-case	for international transport	M

5.2. Lot 2 - Portable desktop or mobile (in a suitcase) document inspection and fingerprint scanner device

5.2.1. Definition

Portable desktop or mobile (in a suitcase) document inspection and fingerprint scanner device composed of a full-page document scanner/reader and software capable to perform optical, electronic, and combined checks for authenticity verification of passports, ID cards, resident permits, visas, stamps and other security documents for document checks and Tenprint fingers (1x4, 4x1, 1x2, 2x1, 2x2 scanning method) scanner and software capable to perform fingerprint scanning and recording at all types of environments.

5.2.2. Description of use

The equipment has to have capability to be used with computer/laptop.

Although portable and capable to be powered by battery for some time, the equipment is for the use in a stationary mode on a desk where access to AC is generally available for instance for checks in first line booths, in temporary offices/containers such as at hotspots and checkpoints for first or second line indoor comprehensive optical, electronic, and combined checks.

Images and information extracted from the inspected document and fingerprints as well as metadata related to the inspection may be automatically anonymized and saved for further processing for instance for producing alerts or forwarding information to other posts and experts, for situation monitoring etc.

The use of a computer together with the equipment is required for processing of captured information and images. This capability is mandatory.

5.2.3. Requirements - Document inspection and fingerprint scanner (two in one)

The following requirements are compliant with these de-facto standards:

REQ NR	Component	Parameter	Requirement (describe functionality)	M/O
req-1	General	Compliance	When not otherwise specified, full compliance with BSI TR-03135	M
req-2	General	Compliance	Full compliance with FBI IAFIS IQS Appendix F	M
req-3	General	Compliance	Compliance with ISO/IEC 19784-1:2018 requirements	M
req-4	General	Compliance	Compliance with ISO/IEC 19794-4:2011 requirements	M
req-5	General	Compliance	Compliance to IDENT requirements	M
req-6	General	Compliance	Compliance to DHS requirements	M
req-7	General	Compliance	FCC, CE, RoHS	M
req-8	Scanning Module	Read Capabilities	ICAO 9303 and ISO 7501 defined machine readable passports (2 lines of 44 characters)	M
req-9	Scanning Module	Read Capabilities	Machine readable visas (2 lines of 36 characters), ID2	M
req-10	Scanning Module	Read Capabilities	Machine readable identification cards (2 lines of 36 characters, 3 lines of 30 characters), ID1	M

REQ NR	Component	Parameter	Requirement (describe functionality)	M/O
req-11	Scanning Module	Read Capabilities	chips compliant to ISO 14443 type A and B	M
req-12	Scanning Module	Read Capabilities	One-dimensional (Code 128, Code 39, EAN 8, EAN 13, ITF, etc.) bar-codes reading and de-coding	M
req-13	Scanning Module	Read Capabilities	two dimensional (PDF-417 etc.) bar-codes reading and de-coding	M
req-14	Scanning Module	Read Capabilities	Read and decode barcode on latest version of Syrian passports	M
req-15	Scanning Module	Read Capabilities	Travel documents which do not strictly comply with ICAO standards	O
req-16	Scanning Module	Hardware	Provide mechanism to press the document flat onto the capture area	M
req-17	Scanning Module	Scan Capabilities	Available of Tenprint fingerprint scanning in 1x4, 4x1, 1x2, 2x1, 2x2 scanning method	M
req-18	Scanning Module	Scan Capabilities	Settings of fingerprint scanning shall be flexible	O
req-19	Scanning Module	Scan Capabilities	Finger roll support	M
req-20	Scanning Module	Scan Capabilities	Automatic scan support	O
req-21	Scanning Area	Scanning Area size	≥ 125 x 88 mm	M
req-22	Scanning Area	Initialisation and recycling time for reading MRZ	≤ 2s	M
req-23	Scanning Area	Initialisation and recycling time for reading biometric data (facial data)	≤10s	M
req-24	Scanning Area	Scanning multiple pages/sides		O
req-25	Scanning Area	ID1 scanner (both sides simultaneously)		O
req-26	Scanning Area	Image quality	Capture all areas with the same quality	M
req-27	Illumination - Light sources	UV light	365 nm	M
req-28	Illumination - Light sources	UV light	transmitted	O
req-29	Illumination - Light sources	IR light	≥ 850nm, incident	M
req-30	Illumination - Light sources	IR light	spot	O

REQ NR	Component	Parameter	Requirement (describe functionality)	M/O
req-31	Illumination - Light sources	Visible (white) light	400-650 nm, incident	M
req-32	Illumination - Light sources	Visible (white) light	transmitted	O
req-33	Illumination - Light sources	Visible (white) light	Sidelight/Oblique light	M
req-34	Illumination - Light sources	Coaxial light		O
req-35	Illumination - Light sources		Adjustable exposure for UV	O
req-36	Camera		Colour	M
req-37	Camera	Image resolution	≥ 500 dpi (preferably 1000 dpi)	M
req-38	Camera	Magnification under all light sources	≥ 12x (15x preferred)	M
req-39	Camera	Display resolution	≥ 1280 x 768	M
req-40	Camera		Possibility to manually adjust exposure	O
req-41	Camera	Colour depth	24 bits/pixels RGB, in accordance with the ANSI/NIST-ITL 1-2011 Update 2015 standard or newer version	M
req-42	Camera	Image formats	BMP, JPEG, JPEG2000, PNG, WSQ, with FBI certificated WSQ compression (ISO/IEC 19794 or ISO/IEC 15444-1)	M
req-43	Camera	Image quality	constant - uniform	M
req-44	Camera	UV images	possibility to capture multiple UV images	O
req-45	Radio Frequency Identification (RFID)/Chip module	Chip type	ISO 14443 type A and B	M
req-46	Radio Frequency Identification (RFID)/Chip module	Chip type	Other chip types (non-ISO 14443 conformant)	O
req-47	Radio Frequency Identification (RFID)/Chip module	Chip type	ISO 7816 (contact chip on smart cards)	M
req-48	Radio Frequency Identification (RFID)/Chip module	Access Mode	Plain/Direct	M
req-49	Radio Frequency Identification (RFID)/Chip module	Access Mode	Basic Access Control (BAC) + Secure Messaging (ISO18013)	M
req-50	Radio Frequency Identification (RFID)/Chip module	Access Mode	PACE / SAC	M

REQ NR	Component	Parameter	Requirement (describe functionality)	M/O
req-51	Radio Frequency Identification (RFID)/Chip module	Access Mode	Extended Access Control 2.0 (EAC) (ISO18013)	M
req-52	Radio Frequency Identification (RFID)/Chip module	Authentication	Public key infrastructure	M
req-53	Radio Frequency Identification (RFID)/Chip module	Authentication	Password Authenticated Connection Establishment	M
req-54	Radio Frequency Identification (RFID)/Chip module	Authentication	Password Authenticated Connection Establishment Chip Authentication Mapping	M
req-55	Radio Frequency Identification (RFID)/Chip module	Authentication	Terminal Authentication	M
req-56	Radio Frequency Identification (RFID)/Chip module	Authentication	Active	M
req-57	Radio Frequency Identification (RFID)/Chip module	Authentication	Passive	M
req-58	Radio Frequency Identification (RFID)/Chip module	Authentication	Chip-Authentication	M
req-59	Radio Frequency Identification (RFID)/Chip module	Certificate Management	local storage	O
req-60	Radio Frequency Identification (RFID)/Chip module	Certificate Management	program interface for certificates management	M
req-61	Radio Frequency Identification (RFID)/Chip module	Reading of Information	Data Group 1: Personal Data	M
req-62	Radio Frequency Identification (RFID)/Chip module	Reading of Information	Data Group 2: Facial Image	M
req-63	Radio Frequency Identification (RFID)/Chip module	Reading of Information	Data Group 3: Finger Images	M
req-64	Radio Frequency Identification (RFID)/Chip module	Reading of Information	Data Group 7: Displayed Signature or Mark	O
req-65	Radio Frequency Identification (RFID)/Chip module	Reading of Information	Data Group 11: Additional Information on Holder	O

REQ NR	Component	Parameter	Requirement (describe functionality)	M/O
req-66	Radio Frequency Identification (RFID)/Chip module	Reading of Information	Data Group 12: Additional Information on Document	O
req-67	Radio Frequency Identification (RFID)/Chip module	Reading of Information	DATA GROUP 14: CHIP AUTHENTICATION	M
req-68	Radio Frequency Identification (RFID)/Chip module	Reading of Information	Data Group 15: Active Authentication	M
req-69	Radio Frequency Identification (RFID)/Chip module	Reading of Information	All OTHER groups	O
req-70	Radio Frequency Identification (RFID)/Chip module	Baud rate (speed)	ISO 14443 A/B 848Kbps	M
req-71	Radio Frequency Identification (RFID)/Chip module	Baud rate (speed)	Supports asymmetrical communication speeds	M
req-72	Software features	Document detection	Automatic detection of ICAO 9303/ISO7501/ISO14443 compliant passports, visa, ID cards	M
req-73	Software features	Document detection	Detection independent of orientation and compensate rotation	M
req-74	Software features	Document identification	Identification of document model and series based on MRZ	M
req-75	Software features	Document identification	Identification of document model series based on pattern matching	O
req-76	Software features	Document identification	Provide fall-back if MRZ is not readable under IR light	M
req-77	Software features	Document identification	Enable manual identification	M
req-78	Software features	Document identification	Identify ID cards on both sides	M
req-79	Software features	Automatic examination of MRZ lines:	Digit check/sum calculation	M
req-80	Software features	Automatic examination of MRZ lines:	Validity of document	M
req-81	Software features	Automatic examination of MRZ lines:	MRZ printing quality checking	M
req-82	Software features	Automatic examination of MRZ lines:	MRZ OCR reading	M

REQ NR	Component	Parameter	Requirement (describe functionality)	M/O
req-83	Software features	Automatic examination of document features	UV features	O
req-84	Software features	Automatic examination of document features	IR features	O
req-85	Software features	Automatic examination of document features	VIS features	O
req-86	Software features	Automatic examination of document features	Pattern	O
req-87	Software features	Automatic examination of document features	UV dull paper control (security paper)	M
req-88	Software features	Automatic examination of document features	Text alignment	M
req-89	Software features	Automatic examination of document features	Laminate presence and wrinkles	O
req-90	Software features	Automatic examination of document features	B900 ink check	O
req-91	Software features	Automatic examination of document features	MRZ consistency check - analysis (e.g. Font; alignment)	M
req-92	Software features	Automatic examination of document features	Verify chip presence	M
req-93	Software features	Automatic comparison of machine readable information with embedded and biometric readable data	Document number of MRZ with visual data (VIZ)	M
req-94	Software features	Automatic comparison of machine readable information with embedded and biometric readable data	Other data of MRZ with visual data (VIZ)	O
req-95	Software features	Automatic comparison of machine readable information with embedded and biometric readable data	Data of MRZ with personal data on chip (DG1)	M

REQ NR	Component	Parameter	Requirement (describe functionality)	M/O
req-96	Software features	Automatic comparison of machine readable information with embedded and biometric readable data	MRZ-Barcode	O
req-97	Software features	Automatic comparison of machine readable information with embedded and biometric readable data	VIZ-Chip,	O
req-98	Software features	Automatic comparison of machine readable information with embedded and biometric readable data	VIZ-Barcode	O
req-99	Software features	Automatic comparison of machine readable information with embedded and biometric readable data	Barcode-chip	O
req-100	Software features	Automatic comparison of machine readable information with embedded and biometric readable data	Passport photo in VIZ with chip photo (DG2) (with scoring match)	O
req-101	Software features	Automatic comparison of machine readable information with embedded and biometric readable data	Passport data with visa data	O
req-102	Software features	Extraction	Photo image of document	O
req-103	Software features	Extraction	Passport photo	M
req-104	Software features	Extraction	IPI decoding	O
req-105	Software features	Extraction	Kinegrams	O
Req-106	Software features	Extraction	Other graphical fields	O
req-107	Software features	Reference document database	integrated	O
req-108	Software features	Reference document database	update every 2 months	M

REQ NR	Component	Parameter	Requirement (describe functionality)	M/O
req-109	Software features	Reference document database	Possibility to connect to an external database	M
req-110	Software features	Reference document database	Possibility to connect a USB drive via micro/mini/normal USB (Reference Manual/QCCs)	M
req-111	Software features	Reference document database	Possibility to create own database	M
req-112	Software features	Operating software support/compatibility	Windows 10 64 bit or higher	M
req-113	Software features	Operating software support/compatibility	Mac OS, Linux (or Android, iOS)	O
req-114	Software features	Saving	Possibility to save images and information on separate encrypted storage device	M
req-115	Software features	Saving	Possibility to save all images and information	M
req-116	Software features	Saving	Printouts shall be pasted in FBI EFTS, FBI EBTS, IAFIS, XML/http, e-mail transactions	M
req-117	Software features	Saving	Possibility to programme and save default settings/parameters for automatic or manual use	M
req-118	Software features	Logging	XML-scheme established in BSI TR-03135	O
req-119	Software features	Format of logs	XML export	M
req-120	Software features	Type of information logged	Scanner model with serial number, software version, list of images captured, OCR, barcode and RFID data values with field description, confidence values for security checks including automatic face portrait comparison.	O
req-121	Software features	Logging	Provide anonymization capabilities	M
req-122	Software features	Operating software support/compatibility	WebAPI enabling access to device from Web Browser, using JavaScript	M
req-123	Software features	Firmware upgrade	via USB, automatic	M
req-124	Software features	SDK and libraries	Programming languages: C/C++, C#, VB.NET, Java Libraries: Windows DLL	M
req-125	Software features		Source code accessible	M
req-126	Software features		Possibility to run check routines based on transferred data (independent of document reader)	M
req-127	Software features	Update	routine software updates for at least 2 years, within warranty period	M

REQ NR	Component	Parameter	Requirement (describe functionality)	M/O
req-128	Software features	Quality management algorithm	NIST NFIQ 2.0 or newer	M
req-129	Display of information	Communication protocol between PC and reader	Compliance with ISO 7816 (T=1,T=0)	O
req-130	Display of information	Communication protocol between PC and reader	Possibility of integrated messaging (Email, Sms, etc.)	M
req-131	Display of information	Communication protocol between PC and reader	Capability to export data and images	M
req-132	Display of information	All checks	Display all document checks in one GUI	M
req-133	Display of information	Images	Document images shown under UV, IR, white, coaxial light modes	M
req-134	Display of information	Images	Extracted photo (DG2) next to photo from VIZ for comparison	M
req-135	Display of information	Images	OVD Kinegram visualization	M
req-136	Display of information	Images	IPI visualization	O
req-137	Display of information	Charts	Machine Readable Zone (MRZ)	O
req-138	Display of information	Charts	Visual Zone (VIZ)	O
req-139	Display of information	Charts	RFID (personal data)	O
req-140	Display of information	Charts	Barcode, Security paper checks	O
req-141	Display of information	Charts	Text comparison	O
req-142	Display of information	Comparison	Data from MRZ and VIZ	O
req-143	Display of information	Comparison	Data from MRZ and RFID (DG1)	M
req-144	Display of information	Comparison	Data from EF.SOD and EF.COM	M
req-145	Display of information	Comparison	VIZ-Chip, VIZ Barcode, Barcode-Chip	O
req-146	Display of information	Comparison	Automatic comparison with reference database with images side by side	O

REQ NR	Component	Parameter	Requirement (describe functionality)	M/O
req-147	Display of information	Comparison	Possibility to manually select document type, retrieve reference information, and display side by side	M
req-148	Display of information	Results	Fingerprint Liveness Detection	M
req-149	Display of information	Results	Proceeded check overall result (Optical/electronic checks)	M
req-150	Display of information	Results	Result indication of all proceeded checks in one page	M
req-151	Display of information	Results	Select more details via one click	M
req-152	Display of information	Results	Highlight only Irregularities	M
req-153	Display of information	Terminology used for results	It should be straightforward and understandable (no codes)	M
req-154	Display of information	Color code	show results with traffic lights	O
req-155	Display of information	Errors	Display and describe type of (Document/Chip) Errors	M
req-156	Hardware	Device size	Document & fingerprint scanner shall be integrated together, in one box, it shouldn't be set of separate devices and it shall be portable by one person in a suitcase	M
req-157	Hardware	Device Weight	max 5 kg	M
req-158	Hardware	Resistency	Water resistant min IP 53	M
req-159	Hardware	Resistency	Dust resistant min IP53	M
req-160	Hardware	Robustness	Drop from min 1m	M
req-161	Hardware	Robustness	Minimum operation temperature is between 5C° and +45C°	M
req-162	Hardware	Robustness	Minimum storage temperature is between -20C° and +50C°	M
req-163	Hardware	Robustness	Minimum operation humidity is between 0% and 95%	M
req-164	Power Supply		AC (100-240V)	M
req-165	Power Supply	Battery	integrated - rechargeable via USB or AC	M
req-166	Network		connectivity (intranet or any LAN)	M
req-167	Other features and accessories		Provide mechanism to press the document flat onto the capture area	M
req-168	Other features and accessories		Possibility to add a camera to capture photos of the person	O

REQ NR	Component	Parameter	Requirement (describe functionality)	M/O
req-169	Other features and accessories	Input mode	controlled by touch screen tablet, or computer through mouse operation	O
req-170	Other features and accessories	USB port	Type A USB connection 2.0 or higher ensuring speed data transfer	M
req-171	Other features and accessories	Usability	simple and straightforward to operate without extensive technical training, device has to be self-sufficient and be fully functional without connectivity to the external resources	M
req-172	Other features and accessories	Usability	Allow single-handed operation	M
req-173	Other features and accessories	Usability	Provide interactive user-guidance	M
req-174	Other features and accessories	Usability	Guide operators through multi-page verification	M
req-175	Other features and accessories	Usability	Fast and easy capture of wet, dry and dirty fingers	M
req-176	Other features and accessories	Usability	Protected against radio frequencies perturbations	M
req-177	Other features and accessories	Maintenance	Service level agreement on minimum maintenance (hardware and software), max 24 hrs to react, 1 week to fix or replace	M
req-178	Other features and accessories	Warranty	Full replacement [within a week] if DOA, warranty for at least 3 years	M
req-179	Other features and accessories	Training	1/2 day train the trainer course	M
req-180	Other features and accessories	Training	Training materials (tutorials and manuals) for trainers (in pdf) min in English	M
req-181	Other features and accessories	Manual for operation	min English	M
req-182	Other features and accessories	cover/protection		M
req-183	Other features and accessories	carry-case	for international transport	M

6. Delivery, training, warranty and maintenance

6.1. Delivery

The Contractor will be responsible for the timely delivery of requested products. The Contractor will also be responsible to address customs and all import related issues if any.

The equipment shall be:

- delivered the soonest possible but not later than 2 months after the specific contract signature;
- transported (DDP) and delivered to Frontex headquarters.

The delivery address is Frontex, Plac Europejski 6, 00-844 Warsaw - Poland.

The delivery shall take place during working hours (Monday - Friday 09:00-17:00 excluding holidays).

The delivery price shall be included in the product price with no additional charges required for the shipment.

6.2. Training and manuals

The products delivered under the FWC shall fulfil the training and manuals requirements as they are stipulated under point 5 above (Lot-1 req 52 and 53, Lot-2 req 179 and 180).

The Contractor may also be asked to provide the necessary hands-on train-the-trainer training to the staff identified by Frontex on the handling of the purchased equipment. Frontex reserves the right to request such training either together with the delivery of the equipment or at any other moment during the contract duration. The number of Frontex trainees per 1 training session shall not exceed 10 persons.

The training location shall be at Frontex HQ premises in Warsaw. The costs of Frontex staff participation will be covered by Frontex. The training shall be carried out in English language. All training related documents (manuals, presentations, etc.) shall be in electronic and paper format in English language, one copy for each participant.

The duration of the training should be app. 4 hours. The fee for the training must be indicated separately in the financial offer and must cover all costs related with providing the training by the Contractor (travel and subsistence, training materials for participants, preparation fee, etc).

6.3. Warranty and maintenance

The purchased equipment shall be cover the warranty period and maintenance activities as they are requested under point 5 above.

7. Quality monitoring and acceptance procedures

7.1. Quality control procedure

For all products delivered by this contract, the Contractor(s) shall provide the quality certificates. Frontex will monitor the quality of the products provided by the Contractor. Elements that will be monitored include:

- Compliance of the product with the Minimum Technical Requirements as described in point 5 above;
- Quick response to delivery requests and adherence to deadlines and terms stipulated in point 6 above.

The Contractor will be immediately informed in case the quality is not up to expectations in any of the criteria and will be requested to remedy to the identified failure immediately.

7.2. Acceptance procedure

Based on quality monitoring and control, all products delivered under the FWC will be subject to the Frontex acceptance.

Upon delivery of the products which are part of the SOs Frontex shall evaluate them and provide the Contractor with written notice of Acceptance, Partial Acceptance or Non-acceptance.

In the event Frontex provided notice of partial or non-acceptance to Contractor, it shall have the continuing right, at its sole option, to:

- refuse to pay any fees or other amounts associated with such products;
- accept such products on the condition that any fees or other amounts payable with respect thereto shall be reduced or discounted to reflect, to Frontex' satisfaction, the deficiencies present therein or the costs likely to be incurred by Frontex to correct such deficiencies; or
- terminate the contract and/or seek any and all available remedies, including damages.

In case of non-acceptance or partial acceptance of the delivered equipment by Frontex the Contractor shall be obliged to recover it at his expense from Frontex premises within an indicated deadline, which as a rule shall not exceed 5 working days.

8. Implementation of FWC

8.1. Indicative implementation plan for the FWC

The list below presents the indicative plan of the implementation of the FWC, which is not binding on Frontex and may be adapted during the contractual period.

- First Orders for each lot are scheduled to start upon the signature of the FWC;
- Estimated number of Orders per year - 2 for each lot;
- Occasionally, more than one Order may run at the same time.

8.2. Language

All the documentation delivered within the contract shall be in English. Moreover all communication, whether written or spoken, shall be in English.

8.3. Contract management personnel

8.3.1. Contractor's personnel

The Contractor shall be responsible for providing all necessary personnel to ensure the satisfactory performance of its obligations under the FWC and shall supervise and be fully responsible and liable for all the services performed by its personnel and for their compliance with the terms and conditions of the FWC.

During the implementation of the FWC and its Orders the Contractor shall nominate a Contract Manager (CM) for all contractual matters. CM will act as a single contractual contact point. All the correspondence related to the FWC (including the implementation of the Orders) will be addressed to him/her.

8.3.2. Frontex personnel

For the proper implementation of the FWC and its Orders Frontex will nominate a Frontex Contract Manager (FCM), who will act as a single contact point for all the matters related to the FWC implementation, including the implementation of the Orders.