IDmetrix

PRODUCT CATALOGUE

Edition 2026

Product Catalogue

Identity hardware and software for national ID, passport, election, border, banking and transport programmes.

- Secure Identity
- Security Documents
- Election
- Border Control
- Banking
- Government Services
- Transportation

12M+
passports issued with our systems

20M+
cards issued with our systems

4
regions: Europe, Africa, the Middle East and Southeast Asia

ICAO · ISO/IEC
the standards our documents and systems are built to



ABOUT

Identity Technology from Bratislava

IDMETRIX s.r.o. is a Bratislava-based technology company that builds identity systems for governments, banks and transport operators.

We develop everything ourselves, from personalization of ID documents and bank cards to self-service kiosks, biometric enrolment, border control, electronic voting and fare payment. Our systems serve ministries of interior and foreign affairs, civil aviation, social security and border agencies.

EXPERIENCE

Nearly two decades of specialized industry expertise

12M+

passports issued with our systems

20M+

cards issued with our systems

Why IDMETRIX

Experience

- Proven experience in government identity programmes
- Programmes delivered across Europe, Africa, the Middle East and Southeast Asia

Delivery

- End-to-end eID and document issuance capabilities
- Strong integration and system implementation expertise
- ICAO-compliant solutions

Technology

- Advanced biometric technologies
- AI-driven innovation initiatives



Credential personalization



Financial cards



Self-service registration



Biometric enrolment



Border management



Electronic voting

Built to International Standards

ICAO Doc 9303 machine-readable travel documents and ePassports

ISO/IEC Identity card, smart card and biometric data standards

PRODUCTS

Identity Hardware and Software

We design, build and run eID, passport, card and border programmes for governments, banks and transport operators. The equipment and systems behind IDMETRIX identity programmes, organized by application.

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City Bus Solutions · Rail Transit Solutions · Smart Taxi Solutions

SECTION 01

Secure Identity

Enrolment, data, personalization, and issuance systems for national ID and passport programmes.

START HERE

The Identity Document (ID) ecosystem

How registration and enrolment, data management, personalization, dispensing and authentication fit together — and where each machine belongs.

Registration / Enrolment → **Data Management** → **Personalization** → **Dispensing** → **Identity Authentication**

Biometric Enrolment

Capture stations for fingerprints, facial images, iris, and signature data during citizen enrolment.

Mobile application

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Enrolment stations

BioTab 10 IDM2921 · AI-powered tablet 8

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Application systems

Smart Application System IDM2802 · counter island 22

Photo quality

AI-powered Photo Quality Management System · ICAO portrait checking 24

Device management

IDmetrix® Device Management Platform (DMP) · fleet control, security and OTA 25

Identity Data Management System (IDMS)

The program system set of core components behind issuance — enrolment, data preparation, production, issuance, verification and lifecycle management.

16 software components across six stages 27

ID Documents Personalization

Systems that print, laser-engrave, and encode ID cards, passports, and other secure documents.

ePassport systems, Polycarbonate based data page

MLP MiniBook IDM8510 · 60 UPH 42

MLP DeskBook IDM8500 · 120 UPH 44

MLP ProBook IDM8110 · up to 600 UPH 46

ePassport systems, Paper-based data page

INKJET DeskBook IDM8012D · desktop, instant 48

DeskBook Laminator IDM8021 · desktop, film sealing 50

eID card systems

MLP DeskCard IDM6700 · 150 cph 52

MLP ProCard IDM6830 · up to 600 cph 54

Documents Dispensing

Self-service kiosks and dispensing units that hand issued documents over to citizens.

Certificate Issuing Kiosk IDM7921 · unattended A4 issuing 55

Smart ID Card and Passport Dispensing System · self-service kiosk 56

Identity Authentication

Readers and terminals that verify document authenticity and confirm the identity of the holder.

Verification devices

BioTab IDM2920 · multimodal tablet 57

BioTab 10 IDM2921 · AI-powered tablet 8

Management software

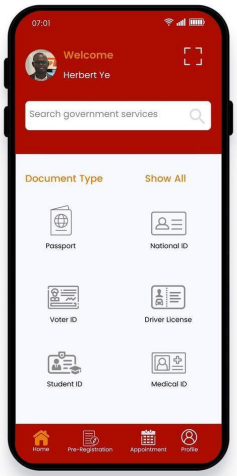
IDmetrix® Device Management Platform (DMP) · fleet control, security and OTA 25

BIOMETRIC ENROLMENT

Online Pre-registration

The application begins on the applicant's own phone, so the counter is left with what only the counter can do.

More on the site
idmetrix.eu/products/secure-identity/online-pre-registration



Registration does not have to start at a desk. With online pre-registration the applicant fills in their details and captures a compliant portrait themselves, from anywhere, and arrives with a pre-registration code. On site the officer verifies who they are, reads the code, captures the fingerprints and the signature, and completes the registration — a hybrid of online application and on-site eServices that takes most of the queue out of the hall.

200+ photo quality checks, to ICAO 9303

One account	200+	ICAO 9303	No studio
Passport, national ID, voter ID	Photo quality inspection standards	Portrait compliance	Portrait taken on a phone

What the applicant does before arriving

One application, many credentials
Passport, national ID and voter ID are applied for through one platform, with one account, instead of a separate procedure and a separate queue for each.

A portrait taken anywhere
The applicant captures their own photo on their own device. Compliance is decided by software rather than by a studio, so a professional camera and a photographer are no longer part of the application.

Quality repaired, not just rejected
Blur and poor lighting are detected and corrected rather than sent back, which is what makes a phone portrait usable for a travel document.

Details filled in once
Personal data is either typed in or extracted automatically from an existing physical document, so the same fields are not written out again at the counter.

Recognition that checks the submission
Clustering analysis and machine learning validate what has been submitted and recognize the data read from the document, so errors are caught while the applicant can still correct them.

Cropped to the document
The background is replaced and the portrait cropped automatically to the specification of the country and the document being applied for — each one has its own geometry.

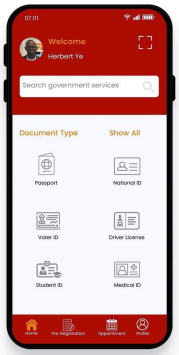
On-site eServices: four steps at the counter

What is left on site is the part that cannot be done remotely — proving the person is who the application says, and taking the biometrics that must be captured under supervision.

1. **Verify identity** Applicant matched to the application
2. **Read the code** Pre-registration data extracted
3. **Capture biometrics** Fingerprints and signature
4. **Complete registration** Record submitted for issuance

Six screens from opening the app to the pre-registration code

The applicant chooses the document, fills in or auto-fills their details, decides where the portrait will be taken, captures it under guidance, confirms everything and receives the code they bring to the counter.



Document type — passport, national ID, voter ID, driving licence and more



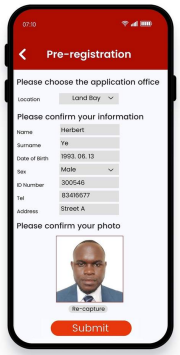
Details typed in or auto-filled from a document, and where the photo will be taken



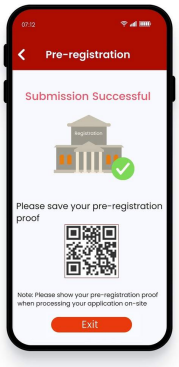
What to remove and what to avoid before the portrait is captured



Capture guided by the frame, on the applicant's own camera



Application office chosen, details and the processed portrait confirmed



The pre-registration code to present on site

Credentials applied for

- Passport
- National ID
- Voter ID
- Residence permit
- Driving licence

IDENTITY AUTHENTICATION

BioTab 10

IDM2921

The next generation of mobile biometric technology, built for enrolment and authentication alike.



More on the site
idmetrix.eu/products/secure-identity/biotab10

BioTab 10 is the AI-powered member of the tablet family. It captures biometrics multimodally and reads identity documents in the field, and the AI in the capture path is what raises the quality of what is recorded while shortening the time it takes to record it — a difference that matters most when the operator is standing at a border post or working a registration queue rather than sitting at a desk.

AI-powered biometric capture

IP65	10 h	10″	AI-powered
Sealing	Battery life	Screen	Capture

Multimodal capture, wherever the applicant is

AI-powered capture
An AI accelerator sits on the tablet's own processor, so the quality checks run where the capture happens — raising what is recorded and cutting the time each capture takes, which is what makes a queue move.

Contactless and NFC
A contactless reader on the front face reads the chip in an eID card or ePassport held against it.

A full shift on one charge
A 10 000 mAh battery runs ten hours — a registration day or a border shift — and fast charging puts it back to 80% in two.

Connected wherever it goes
Two nano-SIMs and an eSIM across GSM, WCDMA, TD-SCDMA and LTE, with dual-band Wi-Fi, Bluetooth and GPS — so a team is not choosing between coverage and a spare device.

Built to be carried
A ruggedized housing with protective corners and sealed port covers, made to be handled outdoors rather than kept on a desk.

Fingerprint sensor
A fingerprint sensor set into the bezel above the screen, within reach of an applicant standing opposite the operator.

Document reading
The data page of a passport or ID card is read on the screen and returned as a parsed record — portrait, MRZ lines and the biographical fields, ready to check.

Iris, both eyes at once
A binocular iris scanner reads at arm's length — around 30 cm to enrol, a little wider to compare — and stores a template under a kilobyte, which is what makes iris workable over a mobile connection.

Four secure card slots
Four PSAM slots to ISO 7816 hold the keys a programme needs on the device itself, alongside contactless and contact card reading.

Typical programmes

ID document issuance | Voter registration and authentication | Border crossing authentication | Criminal identification | Client on-boarding



DOCUMENT AUTHENTICATION

Read the document, check the holder

The passport data page is captured on the screen and comes back as a parsed record: the portrait, both MRZ lines and every biographical field laid out for the officer to check. With the contactless reader on the same face, the document and the person in front of it are verified in one exchange.

Technical specification

TABLET

Operating system	Android 12
Processor	2.0 GHz 64-bit octa core 4 × Cortex-A73 and 4 × Cortex-A53 With AI accelerator
Graphics	Arm Mali-G72 MP3, 700–800 MHz
Memory	4 GB RAM 8 GB storage Micro SD to 256 GB
Display	10.1 inch, 1920 × 1200 FHD 300 cd/m² Multi-touch
Battery	10 000 mAh Fast charge to 80% in two hours
Size and weight	275 × 225 × 22.5 mm About 1.2 kg
Sealing	IP65
Interfaces	2 × USB Type-A 1 × USB Type-C
Sensors	Proximity Light Acceleration
Audio	Speakers and microphone FM over a Type-C headset

CONNECTIVITY

SIM	2 × nano SIM, dual standby eSIM supported
Bands	GSM CDMA BC0/BC1, EVDO BC0/BC1 WCDMA B1/2/5/8 TD-SCDMA B34/39 FDD/TDD-LTE B1/2/3/5/7/8/12/17/20/28/34/38/39/40/41
Wi-Fi	Dual band 2.4 and 5 GHz 802.11 a/b/g/n/ac
Bluetooth	4.2
Location	GPS and A-GPS
PSAM	4 slots ISO 7816

CAMERAS

Front	5 megapixels Autofocus
Rear	13 megapixels Automatic exposure, focus and white balance With flash

BIOMETRIC CAPTURE

Single fingerprint scanner	Capture area 13 × 18.3 mm 500 dpi, 256 grey levels Capture under one second FBI-PIV, MINEX III, ISO 19794-2 and NIST-378 Certified FBI-PIV, RoHS, STQC, WEEE, WHQL
4-4-2 scanner (optional)	Platen 83.3 × 78.2 mm, capture area 81.28 × 76.2 mm 500 dpi, 256 grey levels Four-finger flat 1600 × 1500, two-finger 900 × 900, single and rolled 800 × 750 FBI IQS Appendix F Certified FBI, KC, CE, FCC, UL, IEC 62471, WEEE, RoHS, REACH, WHQL Connects by USB cable
Iris scanner	Binocular capture 27–31 cm to enrol, 25–35 cm to compare Template under 1 KB ISO 19794-6

CARD READING

Contactless	ISO 14443 Type A and B FeliCa Range 0–2 cm
Contact	ISO/IEC 7816 1/2/3/4 (T=0 and T=1)

ENVIRONMENT

Operating temperature	–10 °C to 50 °C
Storage temperature	–25 °C to 70 °C
Operating humidity	5–95% RH, non-condensing
Storage humidity	5–90% RH, non-condensing

BIOMETRIC ENROLMENT

BioCase

IDM2909

A complete biometric registration station that closes into a rugged flight case and travels to the applicant.



More on the site
idmetrix.eu/products/secure-identity/biocase

The BioCase is a portable, MOSIP-compliant and certified enrolment kit. It captures iris, fingerprint and face, scans documents and prints receipts — everything a registration desk needs, packed into an IP67-rated case that runs for ten hours or more on a battery you can swap in the field. It is built for registration that happens away from an office: a village hall, a camp, a bank branch, a border post. Two configurations are offered — fully integrated, where the station works from inside the open case, and modular, where the capture modules and tablet lift out for immediate deployment.

MOSIP compliant and certified

10 h+	IP67	62 × 47 × 29 cm	< 22 kg
Battery life	Sealed case	Case size	Gross weight

Everything a registration desk needs, in one case

Iris, fingerprint and face

All three modalities are captured from the same station, each device compliant with MOSIP MDS 0.9.5 and scoring its own quality as it captures — NFIQ 2.0 on the fingerprints, quality overlaid on the iris and face preview.

Documents in a second

A 10-megapixel A4 scanner with its own LED array digitizes the breeder documents the applicant brings — one second a page, in colour, greyscale or black and white.

Applicant-facing screen

A 12.3-inch screen with its own speaker faces the applicant, so they can follow the capture, hear the prompts and confirm what has been recorded before it is submitted.

Receipts on the spot

A thermal roll printer issues the receipt at the desk, closing the visit without a return trip — no cartridges to carry and 60 metres of paper on a roll.

Where the registration happened

A GPS receiver rides in the case, so a mobile registration carries the place it was taken as well as the time.

Ten hours off-grid

The battery is built into the case, shows its charge on LED indicators, keeps working while it charges, and swaps for a fresh one when a day runs long.

Built for the field

IP67 rated with a non-slip exterior, shock-padded and dust-tight inside, on wheels with several handles, and ventilated so it can be worked out of with the lid open.

Two configurations

The same capture capability, packaged for two different ways of working in the field.

Fully-integrated model

Capture modules, laptop, secondary screen and accessories are consolidated into a single unit and operated from inside the open case.

Modular model

Capture modules, a tablet and the accessories lift out of the case, so a team can deploy them immediately wherever the registration is taking place.

Typical programmes

ID card issuance · Voter registration · Refugee enrolment · Travel document applications · Bank account opening

Technical specification

CARRYING CASE

Type	IP67 certified, waterproof and crash-protective Rugged, non-slip exterior Wheeled, with several handles
Interior	Dust-tight, with shock-resistant padding All components reachable for maintenance
Lock	Buckles and lock holes Operational setup released by key or password
Dimensions	617 × 469 × 292 mm
Weight	Under 22 kg gross, with all accessories
Ventilation	Aerated, with heat regulation for continuous in-case operation
Setup	Open the case and work — the laptop is fixed in place at a working angle
USB hub	3 × USB 3.0 2 × USB 2.0

POWER

Battery	10 hours or more 115 W supply Embedded in the case and swappable Charge status on LED indicators Operates while charging
Charging point	Mounted outside the case Protected inlet, shielded from water and dust
Power cord	4 m extension with a 2-pin type E outlet for 220/230 V Stows inside the case for transport Plugs into universal standard sources
Surge protection	Attachable surge protector at the 2-pin outlet

LAPTOP

Processor	Intel Core i5-13420H 8 cores / 12 threads 2.1 GHz base, 4.6 GHz turbo 12 MB cache
Memory	16 GB DDR4 One soldered, one DIMM slot
Storage	512 GB M.2 NVMe SSD
Screen	14″ full HD, 1920 × 1080
Graphics	Integrated UHD
Operating system	Windows 11 Home, English
Connectivity	Gigabit Ethernet 10/100/1000 Wi-Fi 802.11ax and Bluetooth
Ports	1 × HDMI 1 × RJ-45 2 × USB 3.0 1 × USB Type-C
Battery	45 Wh internal, 4 hours DC adapter
Size and weight	324 × 215 × 19.9 mm 1.43 kg
Keyboard and mouse	USB keyboard, English QWERTY USB mouse

SECONDARY SCREEN

Screen	12.3″, 1920 × 1280 Display area 259.2 × 172.8 mm
Luminance	300 cd/m² or more
Interfaces	2 × USB Type-C 1 × mini HDMI
Speaker	Built in, with adjustable volume
Size	270 × 189 × 9 mm
Stand	Tablet folding stand

FINGERPRINT SCANNER

Image standard	ISO 19794-4:2011 Annex B1 ANSI/NIST-ITL 1-2007 / 2011 ISO/IEC FCD 19794-4
Resolution	500 native DPI minimum 8-bit, 256 grey levels
Capture	4 + 4 + 2 slaps Rolled fingerprints Single fingerprints
Active platen	81.28 × 76.30 mm for four fingers
Capture mode	Live auto capture with built-in NFIQ quality check Slap segmentation and sequence detection Automatic left / right hand and two-thumb detection Capture quality feedback lights
Quality score	NFIQ v2.0
Preview	Over 3 fps M-JPEG with the NFIQ 2.0 score overlaid
Format	JPEG 2000, lossless

ESD	8 kV, IEC 61000-4-2
EMC	FCC Class A CE emissions
Environment	–10 °C to +55 °C 10–95% humidity, non-condensing IP65
MOSIP	MDS 0.9.5 API handles discovery, streaming and capture
Connection	USB 2.0, bus powered

IRIS SCANNER

Image standard	ISO 19794-6:2011 Annex B Aspect ratio 1:1
Iris diameter	220 pixels minimum
Resolution	11 pixels/mm or more Spatial resolution 60% or better at 4 lp/mm 8-bit, 256 grey levels
Capture distance	12 cm or less
Illumination	Infrared at 850 nm
Capture	Both eyes at once, automatic Left / right eye detection Progressive scan
Image type	VGA (K2) Cropped (K3)
Format	JPEG 2000, lossless
Preview	15 fps M-JPEG with the quality score overlaid
Sensor SNR	Over 36 dB
EMC	FCC Class A
Environment	0 to 50 °C 10–90% humidity, non-condensing IP64
MOSIP	MDS 0.9.5, SBI 1.0 or L0
Connection	USB 2.0, bus powered

FACE CAMERA WITH LED

Image standard	ISO/IEC 19794-5:2011
Camera	1080p with a 90° field of view Sensor 10 megapixels or more Digital zoom, HD autofocus, automatic light correction
Portrait	ICAO full frontal, ±5° rotation 35 × 45 mm, 24-bit RGB on a white background
Exception image	60 × 40 mm full frontal with two palms beside the face, waist up
Skin tones	Captures and renders all skin tones accurately
Capture mode	Plain live capture, or automatic with autofocus, auto exposure and auto white balance Smile, eyes open or closed, mask and other facial detection Automatic cropping to the configured dimensions Capture quality feedback indicator
LED	Sufficient for facial photography in varying light Set to avoid reflections, shadows and a flat face Intensity and warmth adjustable by hand or from software Switches itself on and off around the capture
Audio	Dual omni-directional microphones, clear to one metre
Format	JPEG 2000, lossless
Mounting	Vertically adjustable stand, mountable with the kit
Environment	0 to 50 °C IP65 FCC Class A
MOSIP	MDS 0.9.5, SBI 1.0 or L0
Connection	USB Type-A, one cable for camera and lighting

BACKDROP SCREEN

Size	80 × 120 cm or larger
Fabric	Wrinkle-free, durable and washable Adjustable stand
Transport	Folds into its own bag outside the case, with backpack handles Durable holder for storage
Seating	An office chair with a short back, so the headrest stays out of the photo

DOCUMENT SCANNER

Resolution	3672 × 2754, 10 megapixels
Sensor	1/2.5″ CMOS 24-bit colour
Focus	Autofocus Built-in LED array
Scan size	A4
Speed	One second a page
Colour modes	Colour, patterns, stamps, greyscale, black and white
Output	JPG, GIF, BMP, TIFF, PDF, Word, Excel, TXT
Operating systems	Windows 7 to 11, 32 and 64-bit macOS 10.13 and above Linux
Connection	USB 2.0, USB-IF certified

MONOCHROME PRINTER

Type	Thermal, monochrome
Speed	100 mm/s maximum, ISO/IEC 24734 for thermal paper
Resolution	203 dpi
Paper	Roll, 79.5 ± 0.5 mm wide Up to 80 mm diameter, 60 m of paper
Reliability	100 km
Supplied with	Charger 20 m paper roll Pouch
Operating systems	The kit laptop, Windows 7 to 11, Android and iOS
Connection	USB 2.0, USB-IF certified

GPS

Receiver	WAAS enabled
Acquisition sensitivity	–140 to –150 dBm
Acquisition times	Reacquisition under 10 s Hot start under 15 s Warm start under 45 s Cold start under 60 s
Environment	IP67, dust proof and waterproof
Operating system	Windows 10 and above
Connection	USB 2.0 or higher, Type-A

BIOMETRIC ENROLMENT

BioDesk

IDM2950

A compact terminal that captures name, face, 4-4-2 fingerprints and signature — and takes a fully ICAO-compliant portrait with almost no manual operation.

More on the site
idmetrix.eu/products/secure-identity/biodesk



BioDesk is built around the hardest part of identity registration: getting a portrait that will pass. An auto-focus camera on an adjustable column, an integrated light source and our photo optimization software work together so a compliant photo is captured on the first attempt, in the space of a desk. On our enrolment platform, with Windows and a touch-screen interface in the standard unit, fingerprint scanning, ID document reading and signature capture run on top of the photo — which makes one small terminal a complete personal data enrolment system for ID cards, passports and other secure identity documents.

Face, 4-4-2 fingerprints and signature

Built around the portrait, extended into full enrolment

Face capture
An auto-focus camera frames and focuses the portrait itself, so it is sharp and ICAO-compliant on the first frame with no optics for the operator to adjust.

Signature capture
The applicant signs at the same station, so the specimen signature is bound to the record that has just been captured.

Automatic height adjustment
The camera head finds the applicant's face and travels up or down its column to meet it — standing or seated, adult or child — so nobody has to re-rig the terminal between applicants.

Photo optimization built in
Our photo optimization program is embedded in the capture application, checking and correcting the portrait as it is taken rather than after the applicant has left.

Voice guidance throughout
The terminal talks the applicant through the whole capture, step by step, which is what keeps an unfamiliar person moving without an operator leaning over the screen.

4-4-2 fingerprints
Four fingers of each hand and both thumbs, captured in the standard slap sequence at the same terminal as the portrait.

ID document reading
Existing identity documents are read at the desk, so the breeder record is digitized into the same enrolment session.

Light where it is needed
A light source integrated into the top of the column lifts the photo quality on its own. A white backdrop with an adjustable light is available to improve it further.

Windows and a touch screen
The standard unit runs Windows with a touch-screen interface, so the capture application and the rest of the enrolment client run on the terminal itself.

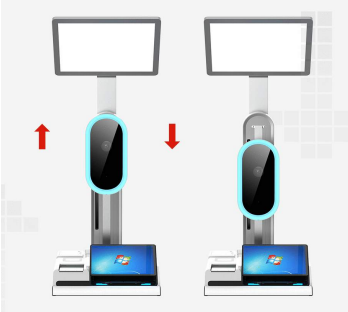
Card and barcode reading
A contactless reader for ISO 14443 Type A and B cards, and a scanner that takes 1D barcodes along with QR, Data Matrix, PDF417, Aztec, MaxiCode and Han Xin codes.

Compact footprint

The whole station occupies little more than a desk, which is what lets a registry put a row of enrolment positions into a small office.

Documents supported

ID cards | Passports | Other secure identity documents



PORTRAIT CAPTURE

The camera moves to the applicant

The camera head travels up and down its column, so the portrait is framed correctly whether the applicant is standing or seated, tall or a child — without asking anyone to crouch or stretch, and without the operator re-rigging the station between applicants. Together with the auto-focus and the integrated light, that is what keeps the capture to a single attempt.



IN THE REGISTRATION OFFICE

Several positions in one room

Because the whole station is the size of a desk, a registry can line up positions along a counter rather than building a studio for each one. The operator works from their own screen on one side; the applicant sits at the terminal on the other, facing the camera, and the two only meet over the record being created.



TERMINAL MANAGEMENT SYSTEM

Every terminal on one screen

Terminals are rarely deployed one at a time. The Terminal Management System gives administrators a single system over the whole estate — so status, configuration and content are handled centrally instead of by visiting each desk in turn.

Technical specification

TERMINAL	
Dimensions	390 × 400 × 1030 mm (L × W × H)
Weight	Approx. 15 kg
Power	DC 24 V, 5 A
Interfaces	DC input × 1 USB 3.0 Type-A × 2 USB Type-B × 1
Speaker	4 Ω, 5 W × 2

TOUCH SCREEN	
Display	10.1 inch 1920 × 1200
Touch	Multi-touch capacitive
Handwriting	Passive electromagnetic pressure sensing 2048 pressure levels

CAMERA AND LIFTING	
Camera	CMOS sensor, 48 megapixels effective Photo output 12 megapixels, 3000 × 4000 Working distance 80 cm
Lifting mechanism	290 mm of travel Adjustable speed

FILL LIGHTING	
Top light	5500 K, 25 W Brightness adjustable
Middle ring light	5500 K, 10 W Brightness adjustable
Bottom light	5500 K, 10 W Brightness adjustable

READING AND CAPTURE	
Contactless card reader	ISO 14443 Type A and Type B 13.56 MHz
Barcode scanner	1D barcodes QR, Micro QR, Data Matrix, PDF417, Micro PDF417, Aztec, MaxiCode, Han Xin LED white illumination
Fingerprint scanner	LES sensor Capture area 88.9 × 80.01 mm, effective 81.28 × 76.3 mm 500 PPI

BIOMETRIC ENROLMENT

BioKiosk

IDM2600

An advanced biometric self-registration solution.

More on the site
idmetrix.eu/products/secure-identity/biokiosk



BioKiosk lets applicants register themselves. Portrait capture, travel-document and smart-card reading, iris, fingerprint and signature, QR scanning and receipt printing are all built into one standing unit. It detects how tall the person in front of it is and raises or lowers the console and camera to suit them, so a person completes the whole data collection at their own pace — and an office turns a queue at a counter into a row of self-service positions.

Unattended self-registration

The whole registration, without an operator

Face capture
A camera on the column photographs the applicant, framed and lit by the kiosk itself rather than by a member of staff, with the portrait checked for ICAO compliance as it is taken.

Document reading
Existing identity documents are read at the kiosk, so the applicant's breeder record enters the session without being re-keyed.

Intelligent lighting
The kiosk measures the light around it and adjusts the fill light to match, so the portrait is evenly lit in a bright lobby or a dim hall alike.

Signature on the screen
The 15.6-inch touch display doubles as the signature pad, so the specimen signature is captured on the same surface the applicant has been working on.

Reachable by everyone
A backlit headphone jack and a backlit panel put audio guidance within reach, alongside the two speakers, so the kiosk works for an applicant who cannot follow the screen.

Managed as a fleet
The Kiosk Management System puts every kiosk on one screen, so a deployment is administered centrally rather than machine by machine.

Fingerprint, and iris if needed
Fingerprints are captured as standard and the kiosk extends to iris, so one machine covers a programme's full biometric set.

Cards, codes and receipts
A contact smart-card reader takes ID-1 cards to ISO 7816, a scanner reads barcodes and QR codes from appointment slips, and a thermal printer cuts the receipt at the end of the session.

Hyper-intelligence
The console and the camera raise and lower themselves to the person in front of them — tall or short, standing or in a wheelchair.

Iris without contact
A colour and an infrared camera take both irises at once from 40 to 80 cm away — no chin rest, and nothing for the applicant to lean into.

Witnessed and recorded
A separate surveillance camera watches the session and a 3D depth camera sees the person in front of the kiosk, which is what lets an unattended machine be trusted with an enrolment.

Used for

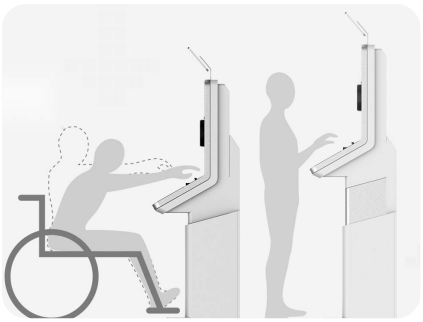
Identity document applications | Border inspection | Customs and immigration declarations | Immigrant labour worker registration | Criminal pre-enrolment



INTELLIGENT LIGHTING

The light adapts to the room

A sensor reads the ambient light and sets the fill light to suit it, so the face is evenly exposed wherever the kiosk stands. It is the difference between a portrait that passes the quality check first time and an applicant sent back to try again.



HYPER-INTELLIGENCE

The kiosk meets the person

The operation console and the camera adjust their own height to whoever steps up — a tall adult, a child, someone in a wheelchair. Nobody has to stretch, crouch or ask for help, which is what makes an unattended kiosk genuinely unattended.



KIOSK MANAGEMENT SYSTEM

Every kiosk on one screen

Kiosks are rarely deployed one at a time. The Kiosk Management System gives administrators a single interface over the whole estate — so status, configuration and content are handled centrally instead of by visiting each machine in turn.

Technical specification

KIOSK	
Dimensions	704 × 535 × 2050 mm (L × W × H)
Industrial computer	Intel i5 16 GB memory 512 GB storage Windows 11 64-bit
Lifting mechanism	Electric vertical travel for both the camera and the console
Fill light	Top and bottom LED
Backdrop	Backlit LED panel 1344 × 794 mm
Audio	2 × speaker Backlit 3.5 mm headphone jack Backlit LED panel
SCREEN AND SIGNATURE	
Touch display	15.6 inch 1920 × 1080
Signature	Captured on the same display
CAMERAS	
Portrait camera	24.1 megapixels effective CMOS sensor
3D camera	Depth 1280 × 720 RGB 1920 × 1080
Surveillance camera	1/3.2″ CMOS 2592 × 1944
BIOMETRIC CAPTURE	
Fingerprint scanner	500 dpi 256 grey levels Capture area 3.2″ × 3.0″
Iris scanner	2 megapixel colour and 8 megapixel infrared cameras Both irises captured at once Recognition distance 40–80 cm
READING AND PRINTING	
Document reader	550 dpi sensor Reads documents to ICAO 9303
Contact card reader	ID-1 card size ISO 7816
QR code scanner	Barcodes and QR codes
Receipt printer	Line thermal 80 mm paper width Automatic cutting

BIOMETRIC ENROLMENT

BioCounter

IDM2610

An intelligent biometric enrolment solution for counter service.

More on the site
idmetrix.eu/products/secure-identity/biocounter



Not everyone should be sent to a self-service machine. BioCounter brings the same automated capture to the counter, where an officer is on hand — which is what the elderly, children and applicants with disabilities need. It is built around face capture for identity document applications: a mirror board with an integrated HD camera lets the applicant see and correct their own posture before the shutter, and the station sets its own camera height and lighting around them.

Mirror board with an integrated HD camera

Automated capture, with an officer beside you

Mirror board with HD camera
The applicant sees themselves in the mirror board and adjusts their own posture before the photo is taken, which is a far easier instruction to follow than being told how to sit.

AI photo management
Dynamic facial recognition and a photo quality inspection system check the portrait as it is captured, so the photo that leaves the counter meets the standard.

Automated camera height
The camera sets its own height to the applicant, so a child and a tall adult are both framed correctly without anyone adjusting a tripod.

Intelligent lighting
The LED panel and backdrop adjust to the ambient light for even illumination — and when the applicant is wearing glasses, the fill light is adjusted to avoid reflections.

Voice guidance
The station talks the applicant through the process, which is what makes it workable for the elderly and for children.

Fits the counter you have
A compact design made for counter service, sized to sit with existing workstations rather than to replace them.

Suited to

ID document applications · Elderly applicants · Children · Applicants with disabilities



AI-POWERED PHOTO MANAGEMENT

Only a compliant photo leaves the counter

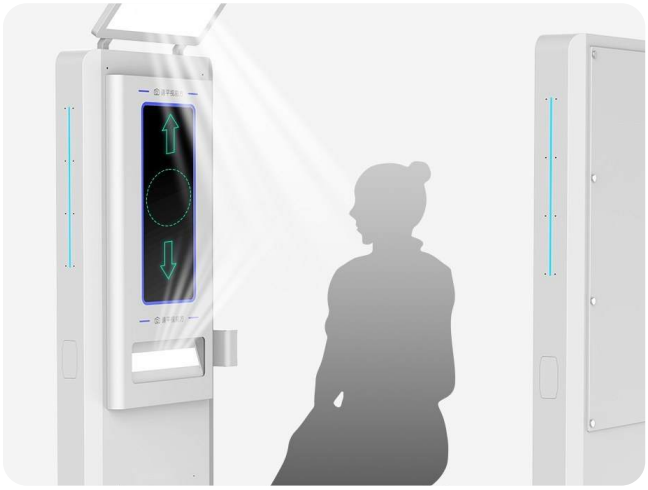
Dynamic facial recognition and the photo quality inspection system judge the portrait at the moment of capture: eyes closed, a broad smile, glasses, a face covering — each is rejected and re-taken while the applicant is still sitting there, rather than discovered later.



AUTOMATED CAMERA HEIGHT ADJUSTMENT

The camera comes to the applicant

Accommodating individuals of varying heights is what keeps a counter moving. The camera positions itself, so the applicant sits down and the station adjusts around them instead of the other way round.



INTELLIGENT LIGHTING SYSTEM

Even light, whatever the room

Brightness is adjusted automatically to the ambient conditions so the face is uniformly illuminated — no shadow down one side, no blown-out forehead. When the applicant is wearing glasses, the supplementary light is adjusted again to keep reflections off the lenses.



CONVENIENT AND USER-FRIENDLY

Spoken guidance through every step

The registration process is stripped back and voice guidance carries the applicant through it — which is what makes the station usable by an elderly applicant, a child, or someone who cannot read the screen.

BIOMETRIC ENROLMENT

BioBooth

IDM2932

An innovative biometric self-registration solution.

More on the site
idmetrix.eu/products/secure-identity/biobooth



BioBooth is an enclosed booth that lets an applicant complete a registration on their own — biometric capture and application submission, start to finish, from one unit. Camera, document reader, fingerprint scanner, signature pad, photo printer and receipt printer are all inside, driven by our own software, and the booth is configured to whatever the programme requires.

The whole registration, completed by the applicant

Everything the applicant needs, inside one booth

Face, fingerprint and signature
All three are captured inside the booth, so the biometric record is completed in a single sitting without an operator present.

Document reading
The applicant's existing identity document is read at the booth and its data carried into the application.

Photo and receipt printing
Printed photos and a receipt come out of the booth itself, so the applicant leaves with something in hand.

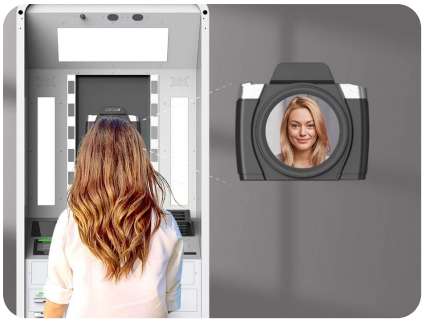
Mirror-based camera
The camera sits behind a mirror, so the applicant sees themselves and settles their posture and appearance before the shutter rather than after.

Enclosed and lit
Inside a closed booth the lighting is controlled rather than inherited from the room, and the fill light adjusts itself to the surroundings.

Configured to the programme
The module set is flexible: the booth is specified around what a given registration actually requires rather than shipped as one fixed build.

Issues registrations for

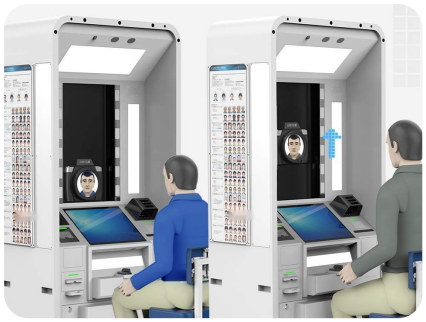
ePassports · ID cards · Driver's licences · Voter cards · Other identity documents



UNIQUE MIRROR-BASED CAMERA DESIGN

The applicant sees what the camera sees

The camera looks through a mirror, so the applicant can smoothly adjust their posture and appearance before the photo is taken. Without an operator to say “lift your chin”, that reflection is what gets the first capture right.



HYPER-INTELLIGENCE

The camera finds the applicant’s height

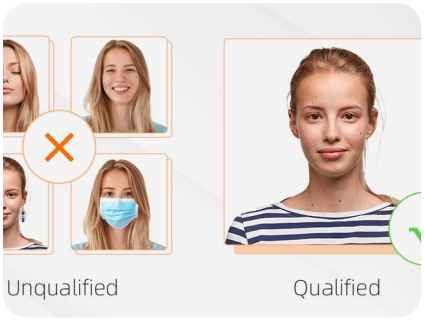
The camera adjusts its own height to whoever has sat down. Nobody is asked to raise or lower themselves to suit the machine, which is what makes an unattended booth work for a queue of different people.



INTELLIGENT LIGHTING SYSTEM

The fill light reads the room

Brightness is adjusted automatically to the surrounding environment, so a booth in a sunlit hall and one in a basement office both produce an evenly lit face.



INTELLIGENT PHOTO QUALITY MANAGEMENT

An uncompliant photo never leaves the booth

Eyes closed, a broad smile, a face covering — the booth recognizes what would fail and asks for another attempt, preventing the capture of photos that would hold up the document later.



AI-POWERED PHOTO ENHANCEMENT

Corrected as it is captured

Light adjustment, intelligent hair recognition and background removal are applied to the portrait on the spot, so what is delivered is a high-quality compliant photo rather than a raw frame someone has to fix later.

ePassport
ID card
Driver’s licence
Voter card

FLEXIBLE USAGE SCENARIOS

One booth across the document portfolio

An efficient self-registration solution for issuing ePassports, ID cards, driver’s licences, voter cards and other identity documents — the same hardware, configured per programme.



EQUIPMENT MANAGEMENT SYSTEM

Every booth on one platform

Booths are deployed across offices, districts and border points. The Equipment Management System lets administrators manage all of them from a unified platform rather than site by site.

Technical specification

KIOSK AND COMPUTER

Housing	Powder-coated, designed for front access and servicing
Machine size	965 × 1051 × 1913 mm (L × W × H)
Industrial computer	i5 quad core, 3.2–3.4 GHz 8 GB memory 256 GB SSD
UPS (optional)	1 kVA / 800 W Input 115–300 V AC

TOUCH SCREEN

Display	17-inch electromagnetic capacitive touch 1280 × 1024, 4:3
Touch	Response under 10 ms Up to 10 simultaneous touches
Handwriting	Pressure sensitive, electromagnetic pen 0.01 mm resolution (2048 LPI)

CAMERA AND LIGHTING

SLR camera	CMOS, approx. 24 megapixels Maximum 6000 × 4000 18–55 mm lens with autofocus
Intelligent fill light	Ceiling and top light, 5600 K, CRI ≥ 95, approx. 30 W Left and right lights, 5600 K, CRI ≥ 95, approx. 15 W Lower light, 5600 K, CRI ≥ 95, approx. 15 W Backlight, 5500–6500 K, approx. 15 W Blue sight guide light, approx. 5 W

READING AND CAPTURE

Automatic card reader	Magnetic stripe: tracks 1, 2 and 3, two-way and single-sided swipe Contact IC card to ISO 7816 Contactless to ISO 14443 Type A/B, Mifare
QR code scanning	1D and 2D barcodes and QR codes Field of view 66° horizontal, 52° vertical, 78° symmetrical Movement tolerance up to 20 cm/s (13 mil UPC) Read response 75 ms
Fingerprint reader (optional)	Plane pressing, 32 × 20 mm window 256 × 360 pixels at 500 DPI Capture rate 6 frames/s or better
Photo scanner	Scans an applicant's own photo for card production

PRINTING AND ISSUANCE

Instant card issuance	Colour dye sublimation and monochrome thermal transfer 300 × 300 dpi Card thickness 0.76 ± 0.1 mm Contact IC to ISO/IEC 7816, contactless to ISO 14443 Type A/B
Card capacity	Issuing box 200 cards Collection box 100 cards
Card holder module	Card sleeved after issuance
Receipt printer	Line thermal, 150 mm/s maximum Paper width 80 ± 1 mm 8 dots/mm Automatic paper cutting

BIOMETRIC ENROLMENT

Smart Application System

IDM2802

“One to many” — one officer, several applicants, one counter.



More on the site
idmetrix.eu/products/secure-identity/smart-application-system

A counter is usually one officer serving one applicant. The Smart Application System breaks that ratio: applicants enrol their own biometrics and submit their documents at their own position, while a single officer supervises several positions at once and verifies what has been submitted through the same interface. It is a hybrid of self-service and counter service — ID document reading, receipt scanning, fingerprint capture, facial recognition, printing and payment in one platform, with AI carrying the routine work.

One officer, several applicants at once

A counter that serves more than one person at a time

One to many
Several application positions are supervised by a single officer, who steps in where a person needs help rather than working through the queue one at a time.

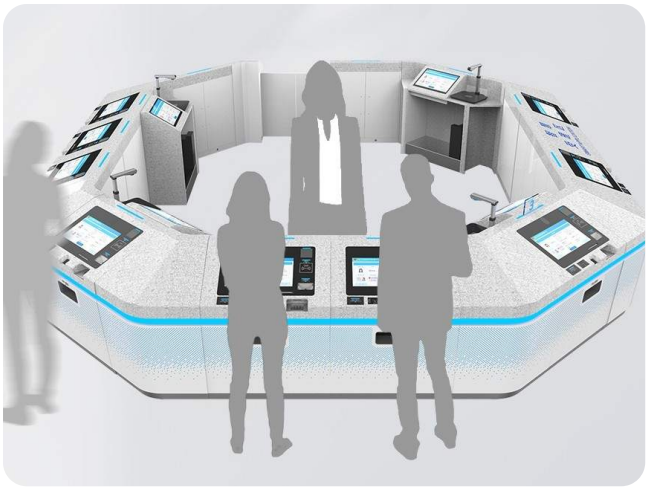
Self-service and counter service
The applicant does what they can do themselves; the officer verifies what has been submitted from the same interface. Neither model on its own moves a hall this quickly.

Document reading and scanning
Identity documents are read and receipts scanned at the position, so the paperwork enters the application without being re-keyed.

Fingerprint, face, signature, iris
The biometric set is configurable — fingerprint and facial recognition as standard, with signature and iris capture where the programme calls for them.

Printing and payment
Receipts print and fees are taken at the same position, so an application is completed rather than passed to another desk.

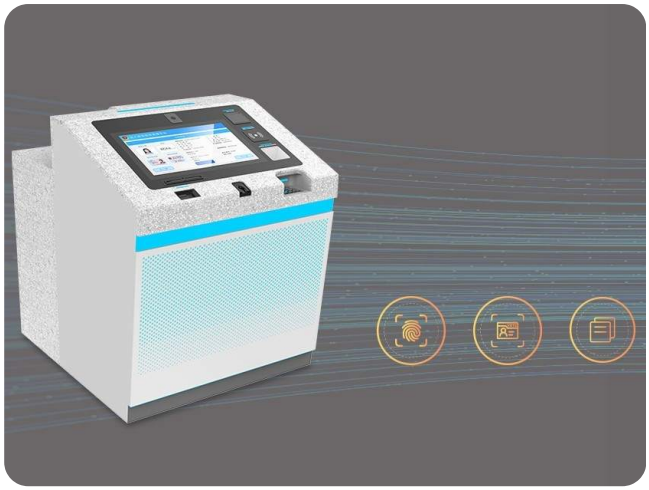
Data brought in, not typed in
Applicant data is acquired from pre-registration platforms, the national identity database or another authorized body, so the visit starts with the record already populated.



ONE TO MANY

Efficiency at counter registration

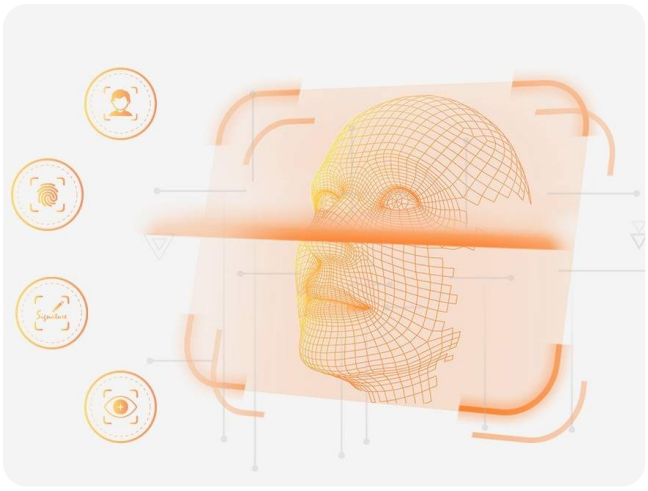
The island puts several application positions around one supervising officer. Applicants work in parallel instead of in sequence, which is where the throughput comes from — the same staff serving a queue that would otherwise need a counter each.



INTELLIGENT AND VERSATILE

Verification, enrolment and submission in one unit

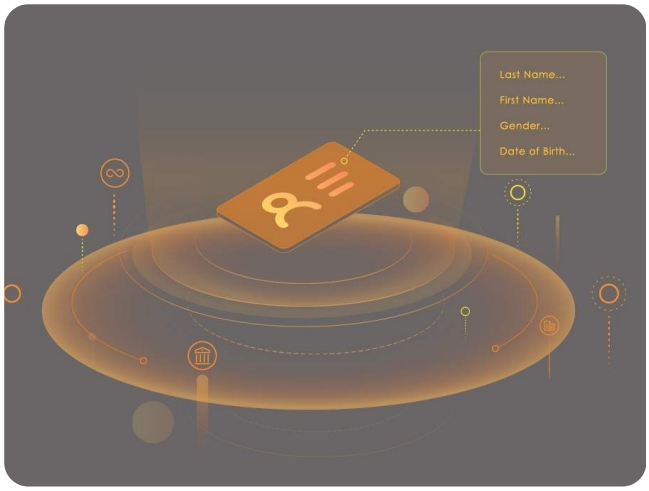
Identity verification, biometric enrolment and application submission are integrated into a single position, so the applicant does not move between machines to complete one piece of business.



COMPREHENSIVE BIOMETRIC ENROLMENT

Configured to the programme's biometric set

Flexible configurations for fingerprint, face, signature and iris capture — a passport programme and a social benefits registration do not need the same modalities, and the same hardware covers both.



STREAMLINED PROCESS

The record arrives before the applicant does

Data is acquired from pre-registration platforms, the national identity database or other authorized bodies. The applicant confirms and completes rather than dictating their details across a counter.

BIOMETRIC ENROLMENT

AI-powered Photo Quality Management System

Photo quality is the foundation of document quality — so the portrait is checked, corrected and approved at the moment it is captured.

More on the site
idmetrix.eu/products/secure-identity/ai-photo-qms

Our registration system uses AI to keep captured data reliable from the very first step. Years of research into portrait capture went into the Photo Quality Management System, which secures the quality of every photo acquisition and keeps it compliant with the ICAO 9303 standard.

Compliant with ICAO 9303

What the system checks and corrects

Pose and framing
The applicant's head position and framing are measured against the ICAO geometry before the photo is accepted.

Accessories
Glasses, face coverings and anything else that hides facial features are recognized as non-compliant.

Automatic cropping
The portrait is cropped to the required dimensions automatically, sharpening the clarity of the facial features.

Expression and eye visibility
Exaggerated expressions, closed or obscured eyes are detected and flagged for an immediate re-take.

Illumination control
Lighting is assessed so that shadows, reflections and washed-out exposure never reach the document.

Background replacement
Portrait and background are separated precisely and the background is replaced with a clean, uniform colour — white hair included.

DEVICE MANAGEMENT

IDmetrix® Device Management Platform (DMP)

One command centre for every enrolment station, kiosk, verification terminal and gate in the programme — wherever in the country they are deployed.

More on the site
idmetrix.eu/products/secure-identity/device-management-platform



In a national identity programme every device is a critical asset. They are geographically dispersed, they run different operating systems, and each one is a place where data can be compromised or a service can quietly stop. The Device Management Platform puts the whole fleet under one authority: a web command centre inside the government's own data centre, a hardened agent on every device, and a mutually authenticated channel between them.

Zero-trust, mutually authenticated TLS 1.3+

99.9%	TLS 1.3+	3 OS families	On-premise
Availability target	Mutual authentication	Windows, Android, Linux	Or private sovereign cloud

What the platform does

Real-time operations map
Every device on a national map with a colour-coded status — active, maintaining, locked — drilled down from the country to the region, the city and the individual unit.

Role-based operational views
A country-wide strategic overview for national administrators, jurisdiction performance for regional directors, and device-level technical detail for IT support — with menu-level permissions behind each role.

Device and component registry
Each unit is tracked from loaded to active, maintaining, locked and retired — down to its main board, face and fingerprint modules and card reader, with installation, removal, maintenance and warranty history against every part.

Port and tamper protection
USB ports are blocked, made read-only or whitelisted; Bluetooth and wireless interfaces are managed; hardware tamper switches and control-box door sensors are monitored and every unauthorized access attempt is logged.

Executive KPIs and metrics
System-wide uptime and device health scores, enrolment throughput and success rates, and the security and compliance posture of the fleet.

Unified alert management
One consolidated view of every critical incident, with priority-based routing and escalation, and integration into email, SMS and SIEM systems.

Intelligent geofencing
A device that leaves its authorized zone locks itself, and the violation is reported in real time with its location.

Secure over-the-air updates
Digitally signed firmware and software, delivered encrypted to certificate-authenticated devices, rolled out in stages with automatic rollback, delta transfers and scheduled maintenance windows.

Integration with national systems

A RESTful integration fabric carries device and operational data to the ABIS, the civil registry, SSO, SIEM and ITSM systems already in place.

Four layers, one chain of trust

The platform is sovereign by design: it runs in the state's own data centre, and nothing between the command centre and a device is unauthenticated.

1. **Web Command Centre** Governance, inventory, tasks, logs
2. **Secure Gateway** Mutual TLS 1.3+
3. **Secure Device Agent** On every managed unit
4. **Managed fleet** Stations, kiosks, terminals, gates



CENTRALIZED DASHBOARD

From data to decisive action

Production and personalization throughput, document stock and dispensing, device ranking and equipment groups — each role sees the operational picture it is accountable for, on a wall display or at a desk.

Platform specification

PLATFORM	
Deployment	On-premise or private cloud, for full data sovereignty
Architecture	Microservices-based, for scalability and resilience
High availability	Primary–backup servers with real-time database replication 99.9% uptime target
Security model	Zero-trust, mutual TLS 1.3+ authentication between agent and gateway
Administration	Role-based access control with menu-level permissions Full system and operator log monitoring
Integration	RESTful APIs to ABIS, civil registry, SSO, SIEM and ITSM systems

MANAGED OPERATING SYSTEMS	
Windows	Active Directory group policy integration Compliance with Intune security frameworks Automated security baseline enforcement Centralized credential and access management BitLocker encryption enforcement
Android	Device Owner (DO) mode Single-purpose kiosk lockdown Controlled application whitelisting System-level permission enforcement Factory reset protection
Linux	Read-only root filesystem for critical devices Secure boot Minimal attack surface configuration Custom security module integration

OVER-THE-AIR UPDATES	
Delivery	Digitally signed firmware and software packages End-to-end encryption of every update transmission Certificate-based device authentication
Rollout	Staged, progressive deployment Automatic rollback on failure detection Bandwidth-optimized delta updates Maintenance window scheduling
Assurance	Pre-update device health checks Update compliance verification Success and failure reporting and analytics Emergency update path
Field conditions	Resilient to intermittent connectivity Interrupted downloads resume Battery-aware update timing Regional update staging

Identity Data Management System (IDMS)

IDMETRIX IDMS is a program system set of core components that manages the identity verification, enrolment, validation, and issuance process for credentials such as e-Passports, or national ID cards.

Core Components of IDmetrix® IDMS for ID Card/ePassport

1. Enrolment

Enrolment Software (ES) 29
AFIS/ABIS 29
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2. Data Preparation

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Key Management System (KMS) 33
CSCA & CVCA & ICAO PKD 34

3. Production

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5. Verification

Document Verifier (DV) 39

6. Lifecycle Management

Identity Data Management System (IDMS) 40

IDMS

Digital Identity System Architecture

Components relationship and data flow scheme.

1 Enrolment

Enrolment Software — Biometric and demographic capture → **ID Quality Assurance SW** — Real-time quality assessment → **AFIS / ABIS** — 1:N duplicate search → **ID Workflow Management** — Under review → approved

Biometrics and demographics are captured, scored while the applicant is still present, searched against the population, and the application is moved to approved.

2 Data Preparation

ID Data Preparation SW — Data groups DG1–DG14, chip script → **Document Signer (DS) SW** — SOD generation and signing → **Key Management System** — CSCA / DS / CVCA keys → **HSM** — Hardware Security Module

ROOTS OF TRUST

CSCA — Country Signing CA — signs DS certificates

CVCA — Country Verifying CA — authorizes the DV

Approved application data becomes data groups, the Security Object Document is signed, and the keys that sign it never leave the hardware security module.

3 Production

ID Production Management — Print queue, card lifecycle → **ID Chip Encoding SW** — DG + SOD + CDS written to chip → **ID Quality Assurance SW** — Production control, hash comparison → **Card & ePassport Printer** — Perso-printer plugin

The signed package reaches the personalization floor: printed, encoded, read back and compared against what was meant to be written.

4 Issuance

Physical Card & ePass Delivery — Central, distributed or hybrid → **Digital ID** — Mobile wallet activation → **Status: ACTIVATED** — Lifecycle database

The document reaches the holder — in the hand, on the phone, or both — and the record moves to activated.

5 Verification

BAC / PACE — Basic chip access → **Passive Authentication** — SOD and CDS verified against the Master List → **Chip Authentication** — Chip authenticity check

→ **Extended Access Control** — Terminal Authentication → DG3 / DG4 → **Biometric matching** — DG2 face, DG3/DG4 fingerprint and iris → **Decision** — Admit or secondary inspection

BEHIND THE CHECK

ICAO PKD — Master List and CRL

Document Verifier (DV) SW — Terminal certificates

At the border the chip is opened, its signature checked against the country that issued it, the chip itself proven genuine, and only then is biometric data released.

6 Lifecycle Management

Data Updates — Name, address → **Reissuance** — Loss, expiry → **Revocation** — Compromise → **CRL / OCSP Update** — Published to verifiers

A credential stays managed after issuance: corrected, replaced, and when it has to be, withdrawn and published as revoked.

Enrolment & quality · Workflow · Data preparation · PKI · Production & encoding · Issuance · Lifecycle · Verification · Biometric matching · Decision

More on the site
idmetrix.eu/products/digital-identity-architecture

IDMS · STAGE 1 · ENROLMENT

IDmetrix® Enrolment Software (ES)

Captures and records the applicant's biographic and biometric identity data.

More on the site
idmetrix.eu/products/idms/enrollment-software

Enrolment Software is where the chain of trust starts. It captures the applicant's biometrics and demographic data — through Online Pre-registration on the applicant's own device, at a counter, a mobile station or a self-service kiosk — checks the quality of every sample while the applicant is still in front of the operator, and hands a secured enrolment package to the IDMS for adjudication.

Key modules

Biometric capture
Fingerprint scanners, facial cameras, iris scanners and signature pads driven from one operator interface.

Demographic data entry
Name, date of birth, gender, address, citizenship and existing ID number, with OCR scanning and NFC chip reading to fill fields from documents the applicant already holds.

Template generation and storage
Creation of standardized biometric templates to ANSI/ISO formats, and ICAO formats for passports.

Document scanning and OCR
Scanning of existing documents with automatic data extraction.

Pre-processing and quality control
Image enhancement, feature extraction (minutiae, facial landmarks) and quality scoring against NIST and ISO standards.

1:1 and 1:N matching
Verification against the database through AFIS/ABIS, so nobody registers twice under a different name.

Liveness detection
Detection of spoofed samples — blurred photographs, masks, artificial fingers, deepfakes.

Workflow and case management
Applicant queue management, status tracking and routing between operators.

IDMS · STAGE 1 · ENROLMENT

IDmetrix® AFIS/ABIS

Automated Fingerprint / Biometric Identification System

One identity, one record — enforced by searching every new applicant against the whole population.

More on the site
idmetrix.eu/products/idms/afis-abis

AFIS encodes, digitizes and searches fingerprint impressions against fingerprint records. In a civil identity programme its job is singular and decisive: establish that the person applying is not already registered under another name. Modern systems extend to ABIS, adding face and iris to the same search.

Role in ID issuance

Duplicate prevention
Checks whether a person is attempting to register under a different name — the single most effective control against identity fraud in a national programme.

High-speed template search
Stores and searches fingerprint templates at high speed, scaling to national population volumes.

Multimodal matching
ABIS adds face and iris recognition to fingerprint matching, so a match survives one modality being weak or unavailable.

Civil and criminal separation
Civil AFIS serves national ID cards, passports and driver's licences; criminal AFIS serves law enforcement. The two are kept distinct.

IDMS · STAGE 1 · ENROLMENT

IDmetrix® Workflow Management (WM)

Orchestrates the identity lifecycle from enrolment through issuance to revocation.

More on the site
idmetrix.eu/products/idms/workflow-management

Workflow Management automates and coordinates the steps that make up an identity programme: enrolment, verification, personalization, issuance, access management, renewal and revocation. It is the layer that decides what happens next, records that it happened, and proves it later.

Key capabilities

No-code / low-code designer
Drag-and-drop interface for creating and modifying processes without programming.

Lifecycle management
Automated onboarding, role changes and offboarding for citizens or employees.

Audit and compliance
Every step logged, with regulatory reporting and support for eIDAS, ICAO and NIST requirements.

Mobile and digital IDs
Issuance of physical cards and mobile credentials alike — passkeys and verifiable credentials in an ID wallet.

Cross-system orchestration
Integration with external verification providers — KYC, biometrics, background checks — alongside AFIS/ABIS, IDMS, PKI and CRM.

Policies and rules
Conditional logic: if fingerprint quality falls below threshold, request recapture; if 1:N matching finds a duplicate, escalate to an operator.

Multi-channel support
Enrolment offices, mobile stations, online portals and self-service kiosks feeding the same process.

Typical workflow stages

1. **Enrolment**
   Capture biometrics and demographic data, quality check.
2. **Identity proofing**
   1:N search in AFIS/ABIS, KYC checks, document verification, liveness detection.
3. **Application processing**
   Data validation, operator approval, assignment of the unique personal number.
4. **Secure data preparation**
   Chip script generation, digital signature via CSCA/DSC, encryption of sensitive data.
5. **Personalization and quality control**
   Printing, chip encoding, biometric template writing, quality control.
6. **Issuance**
   Physical card delivery or digital ID activation in the wallet, PIN setup, activation.
7. **Lifecycle management**
   Data updates, reissuance on loss or expiry, revocation on compromise.

IDMS · STAGE 1 · ENROLMENT

IDmetrix® Quality Assurance (QA) · Enrolment

Rejects a bad sample while the applicant is still at the counter, not weeks later.

More on the site
idmetrix.eu/products/idms/qa-enrolment

Quality Assurance at enrolment scores every biometric and biographic item as it is captured, against the international standards the finished document will be judged by. A poor sample caught here costs a recapture; the same sample caught after personalization costs a document.

Key functions

Fingerprint quality scoring
NFIQ / NFIQ 2.0 scoring from 0–100, detecting a finger too wet or too dry, incorrect pressure, or a partial print.

Iris image quality
Focus, lighting, centring and eyelid or eyelash occlusion, assessed with IREX and ISO/IEC 19794-6 algorithms.

Template quality assessment
Assessment of the extracted template — minutiae for fingerprints, landmarks for face — before it is stored.

Biographic data validation
Date formats, MRZ check digits, ISO country codes, gender and typographic checks.

Quality thresholds and policies
Configurable acceptance thresholds per programme — for example NFIQ 3 or better accepted, 4 to manual review, 5 or worse rejected.

Facial image quality
Validation against ICAO 9303 and ISO/IEC 19794-5: pose, lighting, sharpness, occlusion from glasses or hair, face centring and head size in frame.

Liveness detection
Blink check, micro-movement, 3-D face structure and skin texture, guarding against photographs, masks and deepfakes.

Sequence checking
Thumb, index, middle and so on in the right order for tenprint scans, catching operator error.

Manual review queue
Borderline samples routed to an operator rather than silently accepted or rejected.

Standards

NIST NFIQ / NFIQ 2.0	Fingerprint quality scoring, 0–100.
ICAO Doc 9303	e-Passport facial photograph requirements: head size, pose, lighting, neutral expression.
ISO/IEC 19794-2/5/6	Fingerprint, facial image and iris data formats and quality.
NIST IREX	Iris algorithm quality and accuracy assessment.
ANSI/NIST-ITL	Biometric data format for inter-system exchange.

IDMS · STAGE 2 · DATA PREPARATION

IDmetrix® Data Preparation (DP)

Turns raw applicant data into a structured, signed and encrypted package ready for the chip.

More on the site
idmetrix.eu/products/idms/data-preparation

Data Preparation transforms approved applicant data — demographics, biometrics, cryptographic keys — into the structured, signed and encrypted form that can be written to a physical medium: the smart card chip, the magnetic stripe, the printed surface. It is the step where an application becomes a document.

Key functions

Data import and validation
Import from CSV, XML and databases (LDAP, SQL), with field format validation for dates, country codes and MRZ check digits.

Data group creation
Formation of the structured data groups defined by ICAO 9303: DG1 (MRZ), DG2 (photo), DG3 (fingerprints), DG5 (signature), DG7 (face biometric), DG14 (PKI data).

Encryption
Encryption of sensitive biometrics in DG3 and DG4 for Extended Access Control before they are written to the chip.

Visual data preparation
Image processing for photo and signature, barcode and QR generation, MRZ and PDF417 for the printed surface.

Key management integration
Integration with the HSM for secure storage and use of CSCA and DS private keys during SOD signing.

Audit and logging
Every preparation operation logged — who, when, what data, what signature — for audit and compliance.

Data transformation
Concatenation, truncation, formatting, value mapping — a country name to its three-letter ISO code — and unique document ID generation.

Digital signature (SOD)
Generation of the Security Object Document — the signature covering all data groups that guarantees their integrity — signed by the Document Signer under a CSCA-issued certificate.

Chip encoding script generation
Generation of APDU scripts or binary files for writing to contact (ISO 7816) or contactless (ISO 14443) chips.

Mag-stripe encoding
Data preparation for magnetic stripe encoding in ISO 7811/7812 formats.

Batch processing
Thousands of applications processed in a batch, with rules, signatures and encryption applied automatically for mass issuance.

IDMS · STAGE 2 · DATA PREPARATION

IDmetrix® Document Signer (DS) · PKI signature

Signs the Security Object Document, so a border reader can prove the document is genuine.

More on the site
idmetrix.eu/products/idms/document-signer

The Document Signer uses its private key to create the digital signature on the SOD — the Security Object Document — for each electronic document. That signature is what makes Passive Authentication possible at the border: the reader verifies it against the Document Signer certificate, and the certificate against the country's CSCA.

Key functions

SOD generation
Formation of the Security Object Document per RFC 3369 CMS: hashing all data groups and packaging them into a SignedData structure.

CDS embedding
Inclusion of the Document Signer certificate in the SOD signerInfo field, so a border service can verify without pre-loading the certificate.

HSM integration
Integration through PKCS#11, JCE or CNG for secure key storage and cryptographic operations.

Key management
DS key lifecycle — generation, import, rotation, archival, destruction — with several DS keys supported at once.

API integration
REST, SOAP and file-based interfaces for Data Preparation, IDMS and personalization systems.

Digital signature
SOD signing with the DS private key (RSA or ECC) inside the HSM — the key is never exported in plaintext.

Data group hashing
SHA-256 or SHA-384 hash computation for each data group: DG1 MRZ, DG2 photo, DG3 fingerprints, DG5 signature, DG7 face, DG14 PKI data.

Batch signing
Signing thousands of SODs for mass document issuance at production speed.

Audit and logging
Every signature operation logged: which document, which key, when, and the result.

Role in the ICAO PKI chain

1. **CSCA**
The country root of trust generates the root key pair, signs Document Signer certificates, issues CRLs and uploads certificates to the ICAO PKD.

2. **Document Signer**
Receives its certificate from the CSCA, uses its private key to sign the SOD on each document, and the public certificate is written to the chip for verification.

3. **Master List**
A CSCA-signed file containing all the country's trusted Document Signer certificates, distributed through the ICAO PKD.

IDMS · STAGE 2 · DATA PREPARATION

IDmetrix® Key Management System (KMS)

Generates, stores and retires every key the programme depends on — inside the HSM.

More on the site
idmetrix.eu/products/idms/key-management-system

The Key Management System, paired with a Hardware Security Module, manages the encryption and signature keys behind a secure document programme. In an issuance system it holds the keys for the CSCA, the Document Signer, the CVCA, the Document Verifier and chip encryption — the entire cryptographic basis of the documents the country issues.

Key functions

Key generation
Generation of RSA, ECC, AES and DES keys inside the HSM using true random number generation.

Key lifecycle management
The full lifecycle: creation, activation, use, deactivation, archival, destruction.

Secure storage
Private keys held inside the HSM at FIPS 140-2/3 Level 3, never exported in plaintext.

Key rotation
Periodic replacement, automatic or scheduled, to reduce compromise risk — with old versions retained so historical documents stay verifiable.

Certificate management
X.509 certificate creation, signing, reissuance and revocation (CRL/OCSP), with PKD publication.

Cryptographic operations
Signature, verification, encryption and decryption performed through the API without keys leaving the HSM.

Backup and recovery
Secure encrypted backup under split knowledge, and recovery after failure.

PKI integration
Integration with CSCA and CVCA systems, the ICAO PKD for e-Passports, and national PKI registries.

Access control
Role-based access for key custodian, crypto officer and auditor, with multi-factor authentication and dual control on key operations.

Audit and logging
Complete logging of every key operation — who, when, what operation, what result — for compliance and investigations.

Multi-HSM support
HSM clustering for failover and scale, active-active or active-passive.

IDMS · STAGE 2 · DATA PREPARATION

IDmetrix® CSCA & CVCA & ICAO PKD

The two national roots of trust, and the global directory that makes them useful abroad.

More on the site
idmetrix.eu/products/idms/csca-cvca-pkd

Two separate roots of trust sit under an electronic document programme, answering two different questions. The CSCA answers “was this document really issued by this government, and has the data been tampered with?” The CVCA answers “who is actually allowed to read the protected biometric data from it?” The ICAO PKD is how the answer to the first question travels across borders.

The three elements

CSCA — Country Signing Certificate Authority
The national root of trust for electronic passports and ID documents. Each issuing country establishes a single CSCA. It signs Document Signer certificates, forms the trust chain the border reader follows, issues CRLs, and uploads its certificates to the ICAO PKD. CSCA certificates are typically valid for three to five years and are often also exchanged bilaterally between countries.

CVCA — Country Verifying Certification Authority
The root CA of the national Extended Access Control infrastructure. Unlike the CSCA it does not confirm document authenticity — it authorizes access to sensitive biometric data on the chip. It issues certificates to subordinate Document Verifiers, defines access rights for domestic and foreign DVs, and uses card-verifiable certificates of a special format rather than standard X.509. There is a single national CVCA.

ICAO PKD — Public Key Directory
A global repository where countries upload their CSCA certificates. Border services of all participating countries download these certificates to verify passports from any other country, without needing bilateral key exchange. Validation involves no exchange of personal data about the document holder — it is purely a check of the digital signature on the chip.

Chain of trust

1. **ICAO PKD**
The global directory distributing CSCA certificates and Master Lists.

2. **CSCA certificate**
The country root certificate, which signs…

3. **Document Signer certificate (CDS)**
The operational signing certificate, which signs…

4. **SOD on the chip**
The Security Object Document, which contains…

5. **Data groups DG1–DG14**
The hashes of every data group written to the chip.

IDMS · STAGE 3 · PRODUCTION

IDmetrix® Production Management (PM)

Runs the personalization floor: queues, printers, encoders and the status of every card.

More on the site
idmetrix.eu/products/idms/production-management

Production Management automates and controls personalizing, encoding and issuing physical and digital credentials — from receiving approved data out of the workflow through to card printing, chip encoding and delivery to the holder. It is the system an operator actually works in on the production floor.

Key modules

Card design studio
Visual card layout designer: logos, photographs, barcodes and QR codes, dynamic fields and security features such as ghost image and microtext.

Print queue management
Job queue management with priorities, batch printing and distribution across printers and locations.

Printer management
Support for multiple printer families, with status monitoring, remote management and drivers.

Inventory management
Supply tracking for blank cards, printer ribbons, chips and consumables, with low-stock alerts.

Security and audit
Action logging, role-based access, data encryption and reprint limit control.

Data import and validation
Import of cardholder data from CSV, Excel, LDAP and databases, with field validation and mapping to layout variables.

Card encoding
Magnetic stripe, MIFARE, DESFire, contact and contactless chips, with cryptographic key and application writing.

Card lifecycle tracking
The status of each card — issued, activated, reissued, revoked, lost — with full operation history.

Digital ID issuance
Issuance to mobile wallets, with QR or URL generation for activation.

Reporting and analytics
Issuance volumes, production time, print errors and consumable usage.

Architectural models

1. **Central issuance**
   All cards printed at one secure personalization bureau and delivered by courier or post. High security, tight quality control, economies of scale — the model for national IDs, passports and bank cards.

2. **Distributed issuance**
   Cards printed locally, in offices or at registration desks, on networked printers managed centrally. Instant issuance, convenient for corporate badges, student IDs and access cards.

3. **Hybrid**
   Digital IDs issued instantly through an app, physical cards printed centrally or locally as needed.

IDMS · STAGE 3 · PRODUCTION

IDmetrix® Chip Encoding (CE)

Writes the prepared data to the chip and reads it back to prove it landed correctly.

More on the site
idmetrix.eu/products/idms/chip-encoding

Chip Encoding writes data to contact and contactless smart chips: the data groups, the SOD and the Document Signer certificate produced upstream, plus the keys and applications the chip needs. Post-write verification reads the chip back and compares it with what was meant to be there.

Key functions

Chip initialization
File structure creation, application identifiers and master key setup.

Key management
Cryptographic key management (DES, AES, 3DES) and use of a SAM module for secure key storage.

Multi-technology support
Contact chips, contactless chips and magnetic stripe handled in one solution.

Script generation
APDU script generation for complex scenarios such as e-Passport and banking applications.

Audit and logging
Every encoding operation logged for audit and compliance.

Data encoding
Writing personal data to chip sectors and files according to the data mapping from the database.

Read / write / verify
Reading existing data, writing new data, and post-write verification comparing what was written against the original.

Batch personalization
Batch encoding of hundreds or thousands of cards with automatic data mapping from CSV or database.

Integration APIs
SDK, COM objects and REST API for integration with IDMS, Production Management and access control systems.

Standards

ISO/IEC 7816	Contact smart cards: file system and APDU commands.
ISO/IEC 14443	Contactless cards, including MIFARE and DESFire families.
MIFARE DESFire EV1/EV2/EV3	High-security national IDs, payment applications and multi-application cards.
Contact smart cards	ISO 7816, Java Card and SmartMX for bank cards, SIM, e-ID and e-Passport.

IDMS · STAGE 3 · PRODUCTION

IDmetrix® Quality Assurance (QA) · Production

Checks the printed surface and the written chip before the document leaves the line.

More on the site
idmetrix.eu/products/idms/qa-production

Quality Assurance at production is the last gate before a document becomes real. It inspects the printed card, reads the chip back after writing, and compares hashes against the originals. A document that fails here is destroyed; a document that fails after issuance is a security incident.

Key functions

Card print quality control
Resolution and DPI, colour reproduction, photo and text positioning, and print defects such as stripes and spots.

Hash comparison with the original
Every data group hashed and compared against the values prepared upstream, so a silent write error cannot pass.

Biographic data validation
Field-level checks: date format, MRZ check digits, ISO country codes.

Quality thresholds and policies
Acceptance thresholds configured per project and per document type.

Chip encoding verification
Reading back the data written to the chip, comparing hashes, and checking the SOD signature.

Facial image quality
The portrait re-validated against ICAO 9303 and ISO/IEC 19794-5 as printed, not only as captured.

Manual review queue
Borderline documents routed to an operator on the rejection threshold.

Audit and reporting
Every check logged — which document, what score, accepted or rejected, by whom — with compliance reporting.

IDMS · STAGE 4 · ISSUANCE

IDmetrix® Perso-printer plugin (PP)

The layer between the issuance system and whatever printer is on the desk.

More on the site
idmetrix.eu/products/idms/perso-printer-plugin

The Perso-printer plugin connects Production Management to the personalization hardware itself. It carries the print job to the device, exposes the device's state back to the queue, and lets one issuance system drive several printer families — central bureau machines and desktop units at a district office alike.

Key functions

Printer management
Support for multiple printer families with device drivers, so the choice of hardware does not dictate the choice of issuance software.

Remote management
Printers at distributed sites managed from the central system rather than visited.

Status monitoring
Device state reported back to the print queue: ready, busy, error, consumables low.

Print queue integration
Jobs distributed across printers and locations by priority, with batch printing.

Consumable tracking
Ribbon, film, blank card and chip stock reported per device, feeding the low-stock alerts.

Reprint control
Reprint limits enforced at the device, so a spoiled document cannot quietly become two documents.

IDMS · STAGE 4 · ISSUANCE

IDmetrix® Personalization scripting (PS)

Expresses a document's personalization rules as a script rather than a code change.

More on the site
idmetrix.eu/products/idms/personalisation-scripting

Personalization scripting is how a programme's own rules reach the production line: which fields print where, which data groups are written, what the chip receives and in what order. A new document version, a new card body, a new chip — all of them are a script change, not a new release of the issuance system.

Key functions

APDU script generation
Scripts for complex chip scenarios — e-Passport applications, banking applications — generated rather than hand-written per project.

Layout and field mapping
Cardholder data mapped to layout variables: which database field becomes which printed element.

Data transformation rules
Concatenation, truncation, formatting and value mapping applied as the document is composed.

Conditional logic
Rules that vary the document by case: document type, applicant category, issuing office.

Chip file structure configuration
Application identifiers, keys and access rights configured per card profile and exported to the encoding stage.

Versioning and audit
Script versions held under change control, so it is always known which rules produced which document.

IDMS · STAGE 4 · ISSUANCE

IDmetrix® Digital ID (Mobile Wallet)

The same verified identity, issued to the phone instead of — or alongside — the card.

More on the site
idmetrix.eu/products/idms/digital-id-wallet

Digital ID issues the credential to a mobile wallet: the holder activates it on their own device, and the issuing authority keeps the same control over its lifecycle as it has over a physical card. Issuance is instant, which is what makes the hybrid model work — the digital credential now, the printed card when it arrives.

Key functions

Digital ID issuance
Issuance to mobile wallets, with QR or URL generation for activation by the holder.

Activation and PIN setup
The holder activates the credential on their device and sets the PIN that protects it.

Mobile credentials
Not only physical cards but mobile credentials — passkeys and verifiable credentials held in an ID wallet.

Lifecycle parity
Data updates, reissuance and revocation apply to the digital credential exactly as they apply to the card.

Hybrid issuance
Digital ID issued instantly through the app while the physical card is printed centrally or locally as needed.

IDMS · STAGE 5 · VERIFICATION

IDmetrix® Document Verifier (DV)

Decides which border terminals may read fingerprints and iris — and proves it to the chip.

More on the site
idmetrix.eu/products/idms/document-verifier

The Document Verifier manages the Extended Access Control infrastructure: it issues certificates to inspection systems, enables Terminal Authentication, and controls access to the sensitive data groups — DG3 fingerprints and DG4 iris. It is the middle level of the EAC chain, between the national CVCA root and the reader at the desk.

Key functions

DV certificate issuance
Generation and signing of DV certificates for organizations — police, border service, immigration, consulates — with the access rights each is granted.

CVCA link certificate management
Signing and distribution of CVCA Link Certificates for mutual recognition between countries, so country A's terminals can read country B's passports.

Policy enforcement
Which organizations have rights to which data, in which jurisdictions, for how long — privacy and national rules applied as certificate policy.

Bilateral agreement management
Managing which DVs of which countries trust each other, through cross-certification.

Audit and logging
All certificate issuance, revocation and use logged for regulatory compliance.

Terminal certificate issuance
Issuance of Terminal Certificates to specific inspection systems, based on the DV certificate.

Certificate revocation
Revocation of compromised DV and Terminal certificates through CRL or OCSP.

HSM integration
DV private key storage in an HSM at FIPS 140-2/3 Level 3, with certificate signing performed without key export.

Terminal enrolment
Terminal registration binding a Terminal Certificate to a specific device by serial number and public key.

How Terminal Authentication works

1. **Certificate chain presentation**
The terminal sends the chain to the chip: CVCA Link Certificate, DV Certificate, Terminal Certificate.

2. **Certificate validation**
The chip verifies the CVCA Link Certificate against the CVCA public key written into EF.DG14, then the DV and Terminal certificates in turn.

3. **Challenge-response**
The chip generates a random challenge and the terminal signs it with its private key.

4. **Access grant**
Only after successful authentication does the chip grant access to the data its certificate rights allow — DG3, or DG4, or neither.

IDMS · STAGE 6 · LIFECYCLE MANAGEMENT

IDmetrix® Identity Data Management System (IDMS)

The system of record for an identity, from application through to revocation.

More on the site
idmetrix.eu/products/idms/idms

The IDMS manages the identity verification, validation and issuance process for credentials such as e-Passports and national ID cards, and it keeps managing them afterwards. Enrolment data, vetting status, the certificate authority information associated with an ID, and the state of the credential after issuance all live here.

What the IDMS does

Controls the enrolment process
The enrolment and registration process, including credential vetting.

Maintains enrolment data and vetting status
The record of what was captured, what was checked and what was decided.

Controls the cardholder lifecycle
The state of the credential after issuance and every change to it.

Initiates document production
Approved applications released to the production line.

Manages certificate authority information
The CA information associated with each issued ID.

Lifecycle management

1. **Data updates**
   Name change, address change and other corrections to a live record.
2. **Reissuance**
   On loss, damage or expiry.
3. **Revocation**
   On compromise or death — the credential withdrawn rather than left live.
4. **CRL / OCSP**
   Revoked certificates published, so a verifier anywhere learns that this document is no longer valid.

TECHNOLOGY

MLP – Multi-Layer Personalization



An era with advanced innovations and colour has arrived.

Black-and-white laser photo engraving on polycarbonate (PC) datapages has been deployed worldwide for more than twenty years of machine-readable travel document personalization. MLP adds an advanced colour printing technology and a security-enhanced digital printing technology on top of it, so every layer of the datapage carries its own personalized content.

1 **Laser engraving** 2 **Ink-jet printing** 3 **Digital printing**

More on the site
idmetrix.eu/products/mlp-color-printing

20+ years
Laser engraving on PC datapages

10 years
Colour technology development

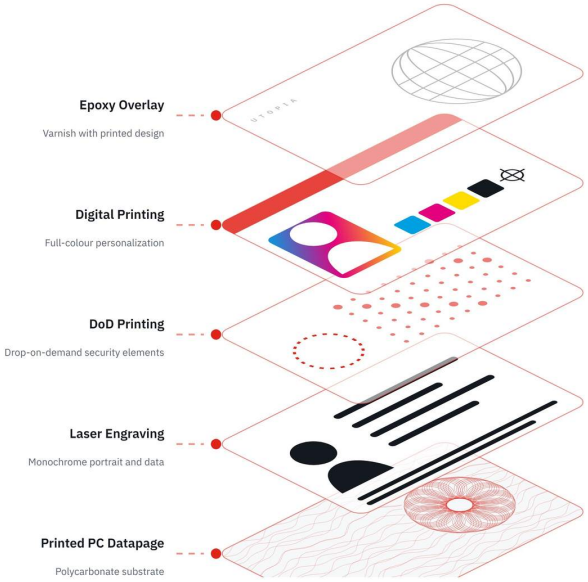
100M+
PC documents personalized

Unique on every layer
Each layer carries its own personalized content, so the document cannot be reproduced by copying a single surface.

Security and integrity
Combining engraving, drop-on-demand and digital printing binds personal data into the card body itself.

Colour where it counts
Full-color portraits and security artwork on a polycarbonate datapage, not only monochrome laser images.

Durability and quality
A mature process built for the lifetime of a travel document, protected by the epoxy overlay on top.



Tested for the life of a travel document

A series of ISO/IEC and CQM tests has been completed and passed. The results show that DoD UV inkjet technology keeps printed content in good condition for more than ten years — the working life of a travel document.

Taber abrasion
ISO 7784

Durability
CQM v2.19.1:2020

Dynamic bending
ISO 10373

Fuel B
ISO 7816 / ISO 10373

Artificial perspiration
ISO 7816 / ISO 10373

Softener storage
ISO 24789

Storage temperature and humidity

Lightfastness
ISO 24789

ID DOCUMENTS PERSONALIZATION

MLP MiniBook

IDM8510

Desktop decentralized MLP personalization solution for ePassport issuance.

More on the site
idmetrix.eu/products/secure-identity/mlp-minibook



The MLP MiniBook is a compact desktop system that personalizes polycarbonate datapage ePassports with the Multi-Layer Personalization security process. It reaches the same quality as the centralized MLP ProBook in a footprint that fits an issuing office, which makes it suited to small and medium-volume programmes and to decentralized issuance networks.

Up to 60 ePassports per hour

60 UPH	600 dpi	1200 dpi	ICAO 9303
Production speed	Laser engraving	UV inkjet printing	Standard compliance

Full MLP personalization on a desktop footprint

Multi-Layer Personalization
The same MLP security process as the larger systems, reaching the quality of the centralized MLP ProBook.

Colour Observation Page
Optional colour personalization of the observation page, including colour image printing.

Personalization Protection Layer
A protection layer over the personalized data, with varnishing that carries its own security feature.

ICAO-Compliant ePassports
Produces highly secure ICAO 9303-compliant ePassports with a true colour photo on the data page.

Advanced Laser Engraving
256 grey-scale engraving with MLI up to 25°, plus embossed Braille, tactile and micro text.

Automatic Ink Cleaning
The print heads clean themselves automatically, keeping print quality stable between batches.

Documents supported

Polycarbonate datapage ePassports | Observation pages (optional)



PERSONALIZATION OUTPUT

Security and colour on one datapage

Laser engraving with 256 grey levels, MLI, embossed Braille and micro text combine with full-color UV printing on the polycarbonate datapage, and the paper observation page can carry matching colour. Register cameras position each process, and a protection layer with security varnish seals the personalized data.

Technical specification

MODULES

Input module	Capacity: 20 booklets (34 pages) Empty detection
Laser module & encoding	Fibre laser, 20 W average power, air-cooled Wavelength 1064 nm, $M^2 < 1.5$ 256 grey-scale engraving, MLI up to 25° Embossed Braille, tactile and micro text 1 × register camera for positioning and register OCR for PSN Contactless chip encoding reader, ISO 14443 type A/B
UV printing module	5-color (CMYK + varnish) inkjet, full-range colour portraits 600 dpi standard, up to 1200 dpi Varnishing with security personalization feature Data page and observation page printing 1 × register camera for printing positioning
Output module	Capacity: 20 booklets (34 pages) Full detection

SYSTEM

Operating system	Windows 11 or above
Connectivity	LAN
Dimensions	801 × 765 × 545 mm (L × W × H)
Power supply	100–240 V AC ±10% 50–60 Hz ±2 Hz Less than 1 kW
Operating environment	Temperature 25 ±3 °C (recommended) Humidity 40–70% RH, no condensation
Storage environment	Temperature 5–40 °C Humidity 20–80% RH, no condensation
Warranty	1 year

INK

Ink palette	Cyan, magenta, yellow, black, varnish
Cartridge fill volume	200 ml each colour
Expiration date	12 months from manufacturing date

ID DOCUMENTS PERSONALIZATION

MLP DeskBook

IDM8500

Decentralized MLP personalization solution for ePassport issuance.



More on the site
idmetrix.eu/products/secure-identity/mlp-deskbook

The MLP DeskBook is a desktop passport personalization solution built on the Multi-Layer Personalization (MLP) security process. Its powerful, modular and flexible design suits decentralized issuance, producing durable, secure and cost-effective polycarbonate datapage ePassports at up to 120 booklets per hour.

Up to 120 ePassports per hour

120 UPH	600 dpi	1200 dpi	ICAO 9303
Production speed	Laser engraving	UV inkjet printing	Standard compliance

Centralized quality in a decentralized system

Multi-Layer Personalization
The MLP security process personalizes every layer of the polycarbonate datapage, so security and colour meet in a single unique document.

High Quality and True Colour
High-precision, high-resolution printing delivers ICAO-compliant ePassports with true-color portrait photos.

Flexible Printing Capability
Supports colour personalization on both the polycarbonate datapage and the paper-based observation page.

Automatic Booklet Opening
The opening module flips each booklet twice and presents pages 2 and 3 facing up, with no manual handling.

Customizable and Adaptable
A modular architecture allows easy configuration and later upgrades as an issuance programme grows.

Low Operational Cost
Easy maintenance and cost-effective consumables keep the cost per personalized booklet competitive.

Documents supported

Polycarbonate datapage ePassports | Paper observation pages



PERSONALIZATION OUTPUT

Security and colour on one datapage

Laser engraving, MLI, 256 grey-level portraits and full-color UV printing are combined on the polycarbonate datapage, while the paper observation page carries matching colour personalization. A register camera positions every process to ±0.1 mm, and an OCR camera verifies the personalized elements before the booklet leaves the machine.

Technical specification

MODULES

Input module	Capacity: 50 booklets (48 pages) Empty detection
Opening module	Flips the booklet twice, opening to pages 2 & 3 facing up
OCR & encoding module	Smartware reader / PCSC reader support Standards: ISO 14443 type A/B 1 × register camera for PSN
Laser & OCR module	Fibre laser, 20 W average power, air-cooled Wavelength 1064 nm, adjustable 20–100 kHz, $M^2 < 1.5$ Marking speed up to 4000 mm/s, 256 grey-level engraving MLI engraving with tilt angle up to 25° 1 × register camera, positioning accuracy ±0.1 mm
UV printing module	5-color (CMYK + varnish) inkjet, full-range colour portraits Resolution 300×300 / 600×600 / 600×900 up to 1200×1200 dpi Varnishing with security personalization feature Datapage and observation page printing 1 × register camera, positioning accuracy ±0.1 mm
QC module	1 × OCR camera verifying personalized elements automatically Optional contactless reader
Output module	Capacity: 50 booklets (48 pages) Full detection
Reject bin	Capacity: 10 booklets (48 pages) Full detection

SYSTEM

Connectivity	LAN
Dimensions	2014 × 820 × 808 mm (L × W × H)
Power supply	100–240 V AC ±10% 50–60 Hz ±2 Hz Less than 1 kW
Operating environment	Temperature 20–30 °C (recommended) Humidity 30–70% RH, no condensation
Storage environment	Temperature 5–40 °C Humidity 10–80% RH, no condensation
Warranty	1 year

INK

Ink palette	Cyan, magenta, yellow, black, varnish
Cartridge fill volume	200 ml each colour
Expiration date	12 months from manufacturing date

ID DOCUMENTS PERSONALIZATION

MLP ProBook

IDM8110

Centralized MLP personalization solution for ePassport issuance.



More on the site
idmetrix.eu/products/secure-identity/mlp-probook

The MLP ProBook is a fully automatic centralized personalization line for polycarbonate datapage ePassports, built on the Multi-Layer Personalization security process. Booklets are opened, encoded, laser engraved, colour printed, quality checked and closed in one industrial-grade pass, with every module controlled from a central computer.

300 ePassports per hour, up to 600 optional

300–600 UPH	1200 dpi	Up to 8	ICAO
Production speed	Colour image printing	Chip encoding readers	Compliant ePassports

An industrial line for national issuance

Fully Automatic Production
Booklets are opened and closed automatically and the whole line is driven from one central computer.

Multi-Layer Personalization
The same MLP security process as the desktop systems, run at centralized production volumes.

Colour on Both Pages
Colour image and monochrome printing on the polycarbonate data page and on the paper observation page.

Three Laser Modules
Three fibre laser modules as standard and an optional fourth, with 256 grey-level and MLI engraving up to 25°.

In-Line Quality Control
A QC module verifies the personalized elements automatically, with rejection bins for anything that fails.

Registered at Every Step
Each module carries its own OCR registration, positioning engraving and printing to ±0.1 mm.

One pass, eight modules

A booklet is fed in at one end and comes out personalized, verified and closed at the other. Each module registers its own position, so every step lands on the page within ±0.1 mm.

1. **Feeding** Booklets in
2. **Flip-over** Opens to pages 2 & 3
3. **OCR** Position registration
4. **Chip encoding** Contactless
5. **Laser engraving** Data and portrait
6. **UV & varnishing** Colour and overlay
7. **QC** Automatic verification
8. **Collection** Closed and stacked

Documents supported

Polycarbonate datapage ePassports

Paper observation pages



PERSONALIZATION OUTPUT

Security and colour on one datapage

Three laser modules engrave the portrait and data with 256 grey levels and MLI, while 5-color UV printing adds full colour to the datapage and to the paper observation page. Four register OCR cameras hold every process to ±0.1 mm, and the QC module verifies the personalized elements before the booklet is closed.

Technical specification

MODULES

Input module	Max. 3 input magazines with a magnetic door Capacity: 80 booklets (32 pages) Empty detection
Opening module	2 × flip units Opens the booklet to pages 2 & 3 facing up
OCR & encoding module	4 × contactless chip encoding readers, up to 8 Standards: ISO 14443 type A/B 1 × register OCR for PSN Rejection bin: 20 booklets (32 pages)
Laser & OCR modules ×3	Optional maximum of 4 laser modules Fibre laser, 20 W average power, air-cooled Wavelength 1064 nm, adjustable 20–100 kHz, $M^2 < 1.5$ Marking speed up to 4000 mm/s, 256 grey-level engraving MLI engraving with tilt angle up to 25° 1 × register OCR, positioning accuracy ±0.1 mm
UV printing module	5-color (CMYK + varnish) inkjet, colour portraits Resolution 600×600 / 600×900 up to 1200×1200 dpi Varnishing with security personalization feature Data page and observation page printing 4 × register OCR, positioning accuracy ±0.1 mm
QC module	Automatic verification of the personalized elements 1 × contactless reader Rejection bin: 20 booklets (32 pages)
Output module	Automatic closing unit 3 × magazines Capacity: 80 booklets (32 pages) Full detection

SYSTEM

Operating system	Windows 10 or above
Connectivity	LAN
Dimensions	8274 × 1264 × 1733 mm (L × W × H)
Power supply	100–240 V AC ±10% 50–60 Hz ±2 Hz Less than 4 kW
Compressed air	≥ 6 bar
Operating environment	Temperature 23 ±3 °C (recommended) Humidity 30–70% RH, no condensation
Storage environment	Temperature 5–40 °C Humidity 10–80% RH, no condensation
Warranty	1 year

INK

Ink palette	Cyan, magenta, yellow, black, varnish
Cartridge fill volume	200 ml each colour
Expiration date	12 months from manufacturing date

ID DOCUMENTS PERSONALIZATION

INKJET DeskBook

IDM8012D

Decentralized ink-jet personalization for passport issuance.



More on the site
idmetrix.eu/products/secure-identity/inkjet-deskbook

INKJET DeskBook personalizes passports with paper-based data pages on a desk rather than in a bureau. Ink-jet printing puts a true-colour portrait, the holder's data and the document's security features onto the page, a built-in OCR module confirms the position and the data before it prints, and an optional chip encoder completes an ePassport in the same pass. It is built for the cases a central bureau handles badly — an emergency replacement, a consular post, a border office — where the applicant should leave with the document in hand.

100 UPH	600 dpi	1 000	ICAO 9303
Throughput	1200 supported	Booklets a cartridge set	Compliant issuance

A passport bureau that fits on a desk

State-of-the-art ink-jet printing
High-quality personalized paper-based security documents with a true-colour photograph — the portrait is printed, not affixed, so it belongs to the page.

Instant issuance
Emergency and decentralized issuance without the postal wait: the document is personalized where the application is taken and handed over in the same visit.

Every booklet checked before it is handed over
An accurate positioning system places the print, and a camera captures the finished page so the application can verify the data itself — the officer validates what the machine has already checked, rather than catching mistakes by eye.

Printing flexibility
Pages are printed one at a time or in facing pairs — 2 and 3 together, say — so data page, observation page and visa endorsements come off one machine.

Optional chip encoding
An encoding module writes the contactless chip in line with ICAO standards, so the machine issues standard passports and ePassports alike.

Fluorescent security inks
Beyond the four process colours, red, green, blue and white fluorescent inks are available — a security feature printed into the page rather than added to it.

Two speeds, one engine
A text mode and a photo mode: the biographical print runs fast, the portrait runs at photographic quality, and the booklet is not held up waiting for the slower of the two.

Paired with the DeskBook Laminator
Printing is half the job: the laminator seals the personalized page under full-page or patch security film, on the same desk, in the same visit.

Low operational cost
Cost-effective consumables and low maintenance. For a site issuing tens of documents a day, the running cost is what decides whether local issuing is viable.

Documents personalized

ICAO-compliant passports · ePassports · Border resident certificates · Observation pages



STATE-OF-THE-ART INK-JET PRINTING

A true-colour data page, printed on paper



INSTANT ISSUANCE CAPABILITY

Issued while the applicant waits



PRECISION PRINTING

The page is read before it is printed



PRINTING FLEXIBILITY

Data page and observation page together

Technical specification

PRINTING

Throughput	Up to 100 booklets an hour
Resolution	600 dpi 1200 dpi supported
Inks	Aqueous, four colour: yellow, magenta, cyan, black Fluorescent red, green, blue and white optional
Modes	Text and photo
Print area	125 × 176 mm
Pages	Printed individually or in facing pairs
Standard	ICAO 9303 compatible

CONSUMABLES AND BOOKLET

Cartridge	40 ml
Yield	Around 1 000 booklets on a set of cartridges
Ink shelf life	36 months from manufacture
Booklet thickness	6 mm or less Other formats by customization

CHIP AND VERIFICATION

RFID reader / encoder (optional)	ICAO 9303 compliant (MRTD) ISO 14443 parts 1 to 4, Type A and B
Vision camera (optional)	2 megapixel colour CMOS, fixed focus, USB 2.0 Offset registration Full-page data capture and verification

SOFTWARE AND CONNECTION

Integration	SDK with API and DLL covering the printer, RFID, camera and illumination
User interface	Graphical, for daily operation and printer status
Connection	USB 2.0 / 3.0
Operating system	Windows 11

MACHINE AND ENVIRONMENT

Dimensions	550 × 450 × 240 mm or less (L × W × H)
Weight	About 25 kg
Power	110 V or 220 V AC ±5% 50 or 60 Hz ±2 Hz
Noise	Under 65 dB
Operating environment	15 to 32 °C 40–60% RH
Storage	–20 to 60 °C 10–85% RH
Quality standards	CCC, CE
Warranty	1 year

ID DOCUMENTS PERSONALIZATION

DeskBook Laminator

IDM8021

Desktop lamination that seals the personalized data page.

More on the site
idmetrix.eu/products/secure-identity/deskbook-laminator



The DeskBook Laminator is the second half of the decentralized ink-jet passport solution: once INKJET DeskBook has personalized the paper data page, this unit seals it under security film. PID temperature control holds the heat steady through every cycle, an accurate positioning system aligns the film on the page, and lamination pressure and temperature are set to the film in use — full-page or patch. It sits on the same desk as the printer and is fed by hand, one booklet at a time — built for government bureaux, embassies and issuance offices personalizing documents where the applicant is, and usable for other secure documents in booklet format.

Full-page and patch security film

1–16 s	120–150 °C	800–900 kg	Full page + patch
A booklet, adjustable	Lamination temperature	Lamination pressure	Film types

The half of the job that decides how long the document lasts

Precision temperature control
PID technology holds the platen at a stable, consistent temperature through the whole lamination, which is what makes the bond durable rather than merely tacky.

Customizable settings
Temperature from 120 to 150 °C, pressure from 800 to 900 kg and a cycle anywhere between one and sixteen seconds — set to the security film in use, so a change of film supplier is a settings change rather than a new machine.

Precise positioning
The positioning system aligns the film to the data page every time. A film laid a millimetre out is a spoiled booklet, and in a decentralized office that booklet is not easy to replace.

Full-page and patch film
Both film formats are supported, so the machine follows whatever the document's security design specifies rather than dictating it.

Reliable manual feeding
The booklet is fed by hand and handled intact through the process — no automatic transport to jam, and no stack of documents at risk if something goes wrong.

Paired with INKJET DeskBook
Print and lamination sit side by side on one desk: the same operator personalizes the data page and seals it, and the applicant waits for both.



PRECISION TEMPERATURE CONTROL

Stable heat, from the first booklet to the last

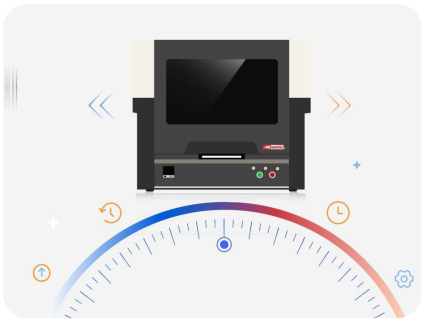
PID control keeps the temperature consistent throughout the laminating process. The bond on the booklet laminated at nine in the morning is the same as the one at five in the afternoon.



PRECISE POSITIONING

The film lands where the page is

Accurate film alignment on every cycle. A misplaced overlay ruins a personalized booklet, so the machine registers the page before it seals it.



CUSTOMIZABLE SETTINGS

Set to the film, not to a default

Lamination pressure and heating temperature are adjusted to the specific type of security film used — which is what lets one machine serve a document design that changes over the years.



RELIABLE MANUAL BOOKLET FEEDING

The booklet comes back intact

The feeding mechanism handles the booklet without creasing or dragging it. In a district office the operator has one blank passport for that applicant, so the machine is built not to spoil it.



HIGH-SPEED AND HIGH-QUALITY

Fast enough for a counter, sealed for a decade

Lamination is quick without giving up quality: the applicant is not left waiting, and the document holds up for the whole of its validity.



A RELIABLE PARTNER FOR INKJET DESKBOOK

Two machines, one desk

Compact enough to stand beside the printer with room left for the work. Together they are a complete passport issuing point in the space of an ordinary office desk.

Technical specification

LAMINATION

Booklet size	178 × 125 ± 5 mm Thickness 0.25 mm
Film	Full-range and patch film
Speed	1 to 16 seconds a booklet, adjustable
Temperature	120 to 150 °C, adjustable
Pressure	800 to 900 kg 8 to 9 kg/cm²

MACHINE

Dimensions	440 × 585 × 515 mm (L × W × H)
Net weight	83 kg

POWER

Voltage	220 V AC ±10%
Frequency	50 Hz ±2 Hz
Socket	220 V AC, 10 A Four outlets minimum
Consumption	500 W

WORKING ENVIRONMENT

Temperature	5 to 35 °C
Humidity	20–95% RH, non-condensing
Air cleanliness	Class 100 000

ID DOCUMENTS PERSONALIZATION

MLP DeskCard

IDM6700

Decentralized MLP personalization solution for ID card issuance.



More on the site
idmetrix.eu/products/secure-identity/mlp-deskcard

The MLP DeskCard is a desktop card personalization machine built on the Multi-Layer Personalization security process. It suits any office or card production environment, reaching the same quality as the centralized MLP ProCard, which makes it a fit for small and medium-volume programmes and for issuing offices that personalize locally.

Up to 150 ID cards per hour

150 UPH	600 dpi	1200 dpi	PC / PVC
Production speed	Laser engraving	UV inkjet printing	Card materials

Centralized card quality, issued locally

Multi-Layer Personalization
The MLP security process personalizes every layer of the polycarbonate card, so security and colour meet in one document.

True-Color UV Printing
5-color CMYK plus varnish inkjet prints colour portraits at up to 1200 dpi, with security elements in the varnish.

Front and Back Engraving
256 grey-level laser engraving with MLI and CLI, on both sides of the card.

Contact and Contactless Encoding
Chip encoding for contact and contactless cards to ISO 7816 and ISO 14443 type A/B.

Automatic Quality Control
A QC camera verifies the personalized elements and diverts anything that fails into the reject bin.

PC and PVC Cards
Handles ISO/IEC 7810 ID-1 cards from 0.76 to 0.84 mm, with double-card and empty detection.

One pass, seven modules

A blank card is fed in at one end and leaves personalized, verified and stacked at the other. Engraving and printing are both positioned to ±0.1 mm.

1. **Feeding** Blank cards in, cleaned
2. **OCR & flip-over** Card number read
3. **Chip encoding** Contact or contactless
4. **Laser engraving** Front and back
5. **UV printing** Colour and varnish
6. **QC** Automatic verification
7. **Collection** Finished cards out

Documents supported

Polycarbonate (PC) ID cards

PVC cards



PERSONALIZATION OUTPUT

Every layer of the card is personalized

Colour portrait, guilloche artwork and card data are printed in 5-colour UV inkjet, while the laser engraves the portrait, MLI/CLI and micro text into the polycarbonate itself. Because each layer carries its own personalized content, the card cannot be reproduced by copying a single surface.

Technical specification

MODULES

Input module	Capacity: 300 cards Card size ISO/IEC 7810 ID-1, thickness 0.76–0.84 mm Empty detection and double card detection Card cleaning component included
OCR & flip-over module	Card flip-over 1 × register OCR for the card number
Chip encoding module	Smartware reader / PCSC reader support Contact and contactless card encoding Standards: ISO 7816 / ISO 14443 type A/B
Laser & OCR module	Fibre laser, 20 W average power, air-cooled Wavelength 1064 nm, adjustable 20–100 kHz, $M^2 < 1.5$ Marking speed up to 4000 mm/s, 256 grey-level engraving MLI and CLI engraving, front and back side 1 × register OCR, positioning accuracy ±0.1 mm
UV printing module	5-color (CMYK + varnish) inkjet, colour portraits 600 dpi standard, up to 1200 dpi Varnish carries security personalization elements Positioning accuracy ±0.1 mm
QC module	Card flip-over 1 × OCR for QC Automatic verification of the personalized elements
Output module	Capacity: 300 cards Full detection
Reject bin	Capacity: 50 cards Full detection

SYSTEM

Connectivity	LAN
Dimensions	1811 × 700 × 636 mm (L × W × H)
Power supply	100–240 V AC ±10% 50–60 Hz ±2 Hz Less than 1 kW
Operating environment	Temperature 20–30 °C (recommended) Humidity 30–70% RH, no condensation
Storage environment	Temperature 5–40 °C Humidity 10–80% RH, no condensation
Warranty	1 year

INK

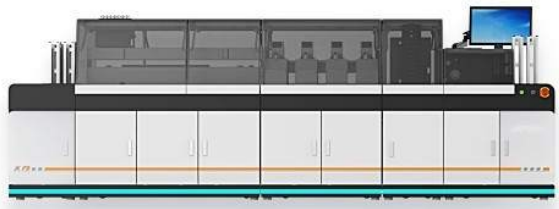
Ink palette	Cyan, magenta, yellow, black, varnish
Cartridge fill volume	200 ml each colour
Expiration date	10 months

ID DOCUMENTS PERSONALIZATION

MLP ProCard

IDM6830

Centralized eID personalization machine for high-volume card issuance.



More on the site
idmetrix.eu/products/secure-identity/mlp-procard

The MLP ProCard is a fully automatic centralized card personalization line that integrates UV inkjet and laser technology on one platform. Its modular configuration is built to the throughput a programme needs — 300, 450 or 600 cards an hour — and it issues secure eID cards with full-range colour printing on polycarbonate.

600 CPH	1200 dpi	5 colours	256
Top production speed	Colour printing	CMYK + varnish	Laser grey levels

An industrial line for national card programmes

Multi-Layer Personalization
UV inkjet and laser technology integrated on one platform, personalizing every layer of the polycarbonate card.

Full-Range Colour Printing
High-speed, high-resolution colour inkjet at 600 dpi as standard and up to 1200 dpi, cured by UV LED.

Front and Back Laser Engraving
256 grey-level fibre laser engraving on both sides, with MLI/CLI, tactile marks, micro text, barcodes and QR codes.

Multi-Encoding Station
High-speed contact and contactless chip encoding built into the line.

Advanced Card Handling
Card transport and printing engineered to hold the highest printing requirement across a long production run.

Modular and Flexible
The configuration is matched to the production volume each card programme needs.

One pass, six modules

A blank card is fed in at one end and leaves personalized, verified and stacked at the other, moving through the line automatically.

1. **Feeding** Blank cards in
2. **Chip encoding** Chip data written
3. **Laser engraving** Data and portrait
4. **UV & varnishing** Colour and overlay
5. **QC** Quality check
6. **Collection** Finished cards out

Documents supported

Polycarbonate (PC) ID cards · PVC cards · PETG cards

Technical specification

PERSONALIZATION

Process	Colour inkjet printing with laser engraving
Ink type	5 colours (CMYK + varnish)
Colour printing resolution	600 dpi standard, up to 1200 dpi
Curing system	UV LED
Laser module	Fibre laser with air-cooling system 256 grey-level engraving
Engraving features	Front and rear side engraving MLI / CLI, tactile marks and micro text Barcodes and QR codes
Encoding	High-speed contact and contactless chip encoding

SYSTEM

Production speed	300, 450 or 600 cards per hour
Card materials	PC, PVC, PETG
Power supply	220 V AC ±10% 50 Hz ±2 Hz

DOCUMENTS DISPENSING

Certificate Issuing Kiosk

IDM7921

An unattended solution for issuing certificates and official documents.

More on the site
idmetrix.eu/products/secure-identity/certificate-issuing-kiosk



Certificates are usually the last thing still tying a citizen to a counter: printed, stamped, signed, logged and handed over by an officer. This kiosk does the whole sequence unattended — laser-printing an A4 certificate on both sides, applying an embossed stamp, a wet ink stamp or an RFID tag, taking the fee, recording the finished document and issuing it, with a card reader, barcode scanner, receipt printer, touch screen and signature panel built in.

Issues finished, stamped A4 certificates unattended

The whole issuing sequence, in one cabinet

Double-sided A4 printing
A laser printer produces the certificate itself, printed on both sides at full A4 — and more than one certificate type comes out of the same unit.

Traceability before issuing
A built-in scanning system records each completed certificate before it is handed over, so every document issued has a record behind it.

Touch screen and signature
The applicant works through a touch screen and signs on the signature panel, so acknowledgement of collection is captured at the machine.

Stamps and RFID
Embossed stamps, wet ink stamps and RFID tags can all be applied to the certificate, so what the citizen collects is a finished, sealed document.

Identification and payment
A card reader and barcode scanner identify the applicant or their collection slip, and the POS module takes the fee, with a receipt printed on the spot.

Robust and compact
A freestanding solid steel cabinet with a small footprint, easy to deploy, and flexible enough that the module set can be configured to the programme.

Issues

A4 certificates, double-sided · Embossed and wet ink stamps · RFID-tagged documents · Receipts



MORE THAN ONE CERTIFICATE TYPE

Different documents from one unit

The kiosk is not tied to a single template. People can collect different types of A4 certificate from one single unit, which is what makes it worth installing in a hall that issues more than one kind of document.



MULTIPLE STAMPS

Sealed, not just printed

A printed sheet is not a certificate until it carries a seal. The kiosk applies embossed stamps, wet ink stamps and RFID tags, so the document that comes out is complete and verifiable rather than something that still has to go to a desk.

DOCUMENTS DISPENSING

Smart ID Card and Passport Dispensing System

Improving efficiency and customer satisfaction with an intelligent self-service approach.

More on the site
idmetrix.eu/products/secure-identity/documents-dispensing



A self-service kiosk that hands issued ID cards and passports directly to applicants. It verifies the collector's identity, keeps documents in secured storage until they are claimed, and removes the counter step from the issuance process entirely.

Providing 24/7 collection services for applicants

Built for secure self-service collection

Multiple Protection Mechanisms
Identity verification and full-process monitoring ensure the security of every document collection.

Advanced Stock Management
Configurable kiosk storage keeps stock levels accurate, preventing shortages or excesses.

Streamlined Workflow
Secure storage and batch processing eliminate counter services for an efficient workflow.

Available for Customization
Kiosks are configured to meet your specific ID card or passport issuance requirements.

Three configurations

The kiosk is built in three variants, so the storage and dispensing mechanism matches the document your programme issues.

eSELF-CARD
For card-format documents such as national ID and voter cards.

eSELF-BOOK
For booklet-format documents such as passports.

eSELF-BC
Combined configuration handling both cards and booklets.

IDENTITY AUTHENTICATION

BioTab

IDM2920

The intelligent and versatile multimodal biometric tablet.



More on the site
idmetrix.eu/products/secure-identity/biotab

BioTab is a MOSIP-compliant and certified Android tablet that both enrols and verifies. Fingerprint, dual iris, face and contactless card reading are built into one 8-inch handheld, so an officer can register an applicant at a desk in the morning and verify identities at a polling station or a border post in the afternoon — on the same device, on battery, over 4G.

FAP50	12 000 mAh	IP65	1.1 kg
Fingerprint scanner	Replaceable battery	Sealing	Weight

Enrolment and verification in one handheld

FAP50 fingerprints
An integrated FAP50 scanner at 500 dpi minimum, certified by both the FBI and MOSIP — large enough a capture area for slap prints, not just single fingers.

Dual iris
Both eyes are captured at once with infrared illumination, to an ISO-compliant image.

Face capture
A 13 MP rear camera with auto-focus and flash for the subject, and a 5 MP front camera for the operator side of the exchange.

Contactless and NFC
An integrated contactless card reader reads the chip in an eID card or ePassport, so the document and the holder are checked at the same moment.

Android 12 and room to work
An octa-core processor up to 3.4 GHz, 12 GB of memory and 512 GB of storage — enough to run matching and hold a working dataset offline.

Made for the field
IP65 sealed, 12 000 mAh replaceable battery, Wi-Fi, 3G/4G, Bluetooth and GPS, with a cover, carrying bag, spare battery and Bluetooth printer in the box.

Typical programmes

ID document issuance · Voter registration and authentication · Border crossing authentication · Criminal identification · Client on-boarding

Technical specification

BIOMETRIC CAPTURE

Fingerprint	Integrated FAP50 500 dpi minimum FBI and MOSIP certified
Iris	Double iris with infrared LED ISO compliant
Front camera	5 MP
Rear camera	13 MP with auto-focus and flash
Card reading	Integrated contactless and NFC card reader

TABLET

Touch screen	8 inches
Operating system	Android 12 or above
Processor	Octa-core, 2.0 GHz up to 3.4 GHz
Memory	12 GB RAM
Storage	512 GB internal

POWER AND CONNECTIVITY

Battery	12 000 mAh, rechargeable and replaceable
Communication	Wi-Fi 802.11 a/b/g/n/ac 3G/4G Bluetooth 4.0+ GPS

PHYSICAL

Dimensions	202 × 260 × 30 mm
Weight	1 100 g
Certification	FBI MOSIP IP65

SUPPLIED WITH

Accessories	Tablet cover Carrying bag Backup battery Bluetooth printer

SECTION 02

Security Documents

Polycarbonate passports, identity cards, driving licences and registration cards, with the security features built into the document body.

ePassport

Passport booklets with a polycarbonate datapage and a contactless chip, to ICAO 9303.

Identity Card

A seven-layer polycarbonate eID card with a dual-interface chip and twenty security features on front and reverse.

Polycarbonate eID Card · 7 layers · 20 features 59

Driving Licence

Polycarbonate driving licence cards in the ID-1 format, personalized by laser engraving.

Vehicle Registration Card

Vehicle registration certificates in card form, carrying vehicle and owner data in the ID-1 format.

Other Security Documents

Residence permits, service cards and other documents built on the same card body and security features.

Polycarbonate eID Card

More on the site
idmetrix.eu/products/security-documents/identity-card

Seven fused layers, a dual-interface chip and twenty security features on front and reverse.

How the IDMETRIX polycarbonate eID card is built: the layers it is laminated from, the printed design before and after personalization, the inks and what they do under UV, IR and NIR light, the antenna inside, and every security feature on both sides — each rated by the level of inspection needed to check it.



Front



Reverse

Format	Body	Chip	Personalization	Features
ID-1 · 85.60 × 53.98 mm	**7-layer polycarbonate, fused**	**Dual interface — contact & contactless**	**Laser engraving, CLI**	**20 on front and reverse**

Twenty Features on Front and Reverse

Twelve printed and embedded features protect the front and eight the reverse. They are layered so that every level of inspection has its own checks, and no single forgery technique can reproduce them all.

FRONT

1	**Anti-Stokes feature**	NIR laser 980 nm
2	**IR drop-out**	IR 850–950 nm
3	**Tactile laser relief**	Touch · oblique light
4	**Microprinted letter field**	Magnifier 8–10×
5	**Optically variable ink (OVI)**	Tilt
6	**Changeable laser image (CLI)**	Tilt left–right
7	**Guilloches with variable line width**	Magnifier
8	**Fluorescent blue ink**	UV 365 nm
9	**Positive microtext**	Magnifier 8–10×
10	**Hot-stamped DOVID**	Tilt
11	**Fluorescent red & yellow inks**	UV 365 nm
12	**See-through window**	Transmitted light

REVERSE

13	**Fluorescent red ink**	UV 365 nm
14	**Radial guilloche fan**	Magnifier
15	**See-through window**	Transmitted light
16	**Contour-line pattern**	Magnifier
17	**Machine readable zone (MRZ)**	Reader · IR
18	**Irregular complex background**	Magnifier
19	**Fluorescent blue cell network**	UV 365 nm
20	**QR code**	Smartphone · reader

SECTION 03

Election

Voter registration and verification equipment for electoral processes.

Voting Registration

Biometric capture stations that register voters and build the roll — in a registration centre, at a counter, or taken out to the district.

BioTab IDM2920 · multimodal tablet 57

BioTab 10 IDM2921 · AI-powered tablet 8

BioCase IDM2909 · mobile enrolment kit 10

BioDesk IDM2950 · enrolment terminal 13

Voter Card Personalization

Laser-engraved, UV-printed voter cards — at a district office desk or as a centralized run before polling day.

MLP DeskCard IDM6700 · 150 cph 52

MLP ProCard IDM6830 · up to 600 cph 54

Voter Identity Authentication

Handheld verification at the polling station: the card, the chip and the fingerprint checked against the roll before the ballot is issued.

BioTab 10 IDM2921 · AI-powered tablet 8

Device Management Platform

Software that holds the whole deployed fleet under one command centre: where every device is, whether it is healthy, what version it runs — and the authority to lock, update or retire it remotely.

IDmetrix® Device Management Platform (DMP) · fleet control, security and OTA 25

eVoting

Electronic ballot marking and casting with a verified paper audit trail, managed across every polling station from one system.

TrustVote IDM2700 · eVoting with VVPAT 61

EVOTING

TrustVote

IDM2700

Revolutionizing elections with trust, security and efficiency.

More on the site
idmetrix.eu/products/election/trustvote



TrustVote is an integrated electronic voting solution that combines an eVoting system with a Verified Paper Audit Trail. The voter marks and casts the ballot on screen, the machine prints the VVPAT slip for them to check and stores it securely, and the result can be audited quickly and accurately against that paper record. Blockchain technology underpins the integrity of the process end to end. The whole polling station travels in its own case: unlocked, opened and voting in minutes, managed from a central system wherever it is deployed.

Every vote leaves a paper record

eVoting	VVPAT	Blockchain	Portable
Ballot marking and casting	Verified paper audit trail	Process integrity	Travels in its own case

A polling station that fits in a carry case

eVoting and VVPAT in one machine
Electronic ballot marking and casting, with VVPAT slip printing, voter verification and secure storage handled by the same unit — not a second device bolted on.

Fast, accurate audits
Results are audited against the stored paper slips efficiently rather than through a manual recount that takes days and invites dispute.

Accessible by design
Visual, audio and tactile controls let voters with impaired sight, hearing or mobility cast their ballot unassisted — which is what secrecy of the ballot actually requires.

Blockchain-backed integrity
Blockchain technology secures the record of the process, so what is counted at the end is demonstrably what was cast during the day.

One identity, one vote
A fingerprint sensor and a contactless card reader sit on the deck, so the voter is confirmed against the roll before a ballot is opened.

Portable, compact and lightweight
The machine and its transparent lid form one sealed case. It ships to the polling station, is opened on any table, and is closed and sealed again for the return.



VERIFIED PAPER AUDIT TRAIL

The voter sees the slip before it is stored

The VVPAT slip is printed, shown to the voter for verification and stored securely inside the same system — an electronic count with a paper record behind every line of it.



PORTABLE, COMPACT AND LIGHTWEIGHT

Ships closed, opens as a polling booth

The transparent lid clamps over the deck for transport and storage, so the same unit that is sealed in a store room is the one that opens on the table at the polling station.



ENHANCED USER EXPERIENCE

A large screen, set to the voter's angle

The touch screen is big enough to show the ballot clearly and hinges to the angle the voter needs, standing or seated. A first-time voter should not need instructions.

Visual guidance

Audio guidance

Tactile buttons

Wheelchair access

IMPROVED ACCESSIBILITY

Every voter casts their own ballot

Visual, audio and tactile controls mean a voter with impaired sight, hearing or mobility votes unassisted — and the screen folds to a height that works from a wheelchair. Secrecy of the ballot only holds if nobody has to be helped through it.



TERMINAL MANAGEMENT SYSTEM

Every machine in the country, on one screen

Managing hundreds of units across districts stops being a logistics problem: configuration, status and results move between the polling stations and the centre through the TMS.

SECTION 04

Border Control

Document reading and verification equipment for border checkpoints.

START HERE

Border Management Solutions

Enhancing border security and streamlining travel with intelligence — the smart counter, automated control gates, and AI analysis of the whole travel document.

Present → **Read** → **Analyse** → **Verify** → **Cross**

Identity Authentication

Contactless verification of the traveller at the checkpoint — the face, and the digital travel credential behind it.

BioFlash IDM2908 · contactless face verification 64

Document Verification

Reading the document and proving it genuine: full-page capture, chip and barcode reading, and examination under white, infrared and ultraviolet light.

Digital Examination Device · portable, multi-light examination 66

EagleEye IDMate IDM5900 · full-page document reader 68

AI Passport Analysis

The whole passport captured and understood — data page, visas and stamps — with the travel history extracted from it.

EagleEye Lite IDM5930 · manual flipping, compact 69

EagleEye Elite IDM5910 · automatic flipping, built-in PC 71

EagleEye Pro IDM5920 · automatic flipping, ultra-high definition 73

Document Management Software

The systems behind the desk and the gate: travel document records, automated border control, and the smart counter itself.

Travel Document Management System · the passport as a record 75

Automated Border Control System (ABCS) · unattended eGates 76

Smart Counter Solution (SCS) · the staffed counter, automated 77

IDENTITY AUTHENTICATION

BioFlash

IDM2908

Facial recognition and digital travel credentials, verified without the traveller touching anything.



More on the site
idmetrix.eu/products/border-control/bioflash

BioFlash combines facial recognition with the reading of digital travel ID codes, so a person can be authenticated contactlessly and the result returned at once. It serves a border check, an access control point or any other place an identity has to be confirmed quickly and reliably, and it can be upgraded with fingerprint scanning and ID card reading when the deployment calls for more.

Contactless identity authentication

What it does

Facial recognition
The face is captured and matched at the point of control, with no contact and no document handling.

Digital travel credentials
Digital travel ID codes are scanned and read, so a credential held on a phone is accepted like a document.

Upgradeable capture
Fingerprint scanning and ID card reading can be added, so one device covers more of the checkpoint as requirements grow.

Access management
Beyond the border, the same unit serves security access control wherever entry has to be tied to a verified identity.

Where it is used

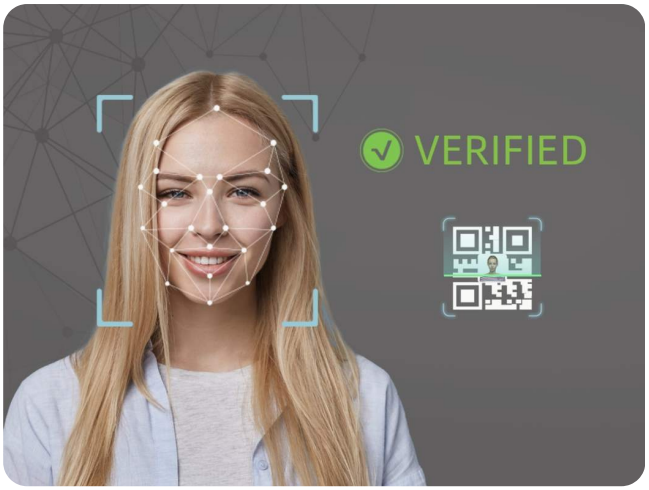
Border checks · Security access control · Identity authentication points



AT THE CHECKPOINT

The traveller is recognized before they reach the desk

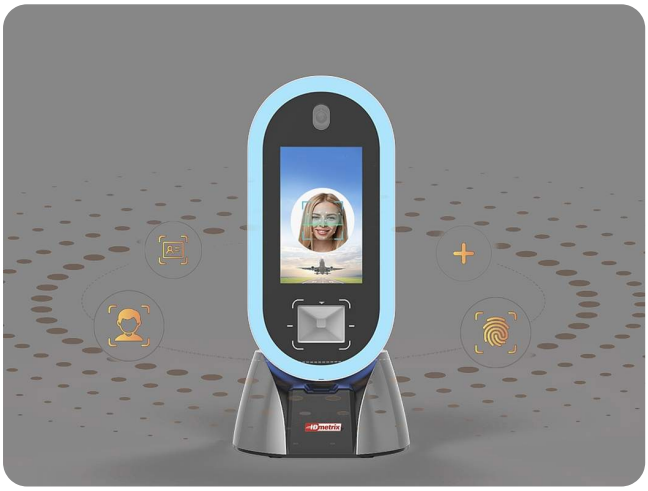
The unit stands where people already walk — a terminal, a gate, an entrance — and captures the face at a distance, so the check happens while the traveller is still approaching rather than after they have stopped.



CONTACTLESS VERIFICATION

The face, or the code on the phone

Facial recognition confirms the person, and a digital travel ID code is scanned from a phone when one is carried — either way nothing is handed over and nothing is touched.



CONFIGURABLE

Face, document and fingerprint, as the deployment needs

Facial recognition is the base; ID card reading and fingerprint scanning can be added to the same unit, so one device covers more of the checkpoint as requirements grow.



BOTH SIDES IN USE

One face for the traveller, one for the officer

The front guides the person being verified; the back shows the result of the check — verified, with the record behind it — to whoever is supervising the lane.

DOCUMENT VERIFICATION

Digital Examination Device

Comprehensive document examination, carried to wherever the check happens.



More on the site
idmetrix.eu/products/border-control/security-features-control-device

A portable examination device for travel documents, with a high-definition screen built into it so the officer sees exactly what the optics see. Its multi-light modes bring out the security features a document carries under different illumination, and magnification, still capture and video recording turn what the officer finds into a record that can be shown to somebody else. That is what makes an authenticity decision possible away from a fixed desk.

Multi-light examination, on a built-in HD screen

Built for examination in the field

Multi-light modes
White, infrared, UV and external UV illumination each reveal a different layer of the document, for a comprehensive and detailed examination.

Magnification
Intaglio, microprint and line structure are enlarged on screen, so the detail that decides authenticity is actually visible.

Portable by design
The check travels to the document rather than the other way round — at a gate, in a vehicle lane, or on board.

High-definition display
The screen is part of the device, so the officer authenticates what is in front of them without a separate workstation.

Capture and record
Stills and video of what the optics see are recorded on the device, so a finding can be kept with the case rather than described from memory.

Where it is used

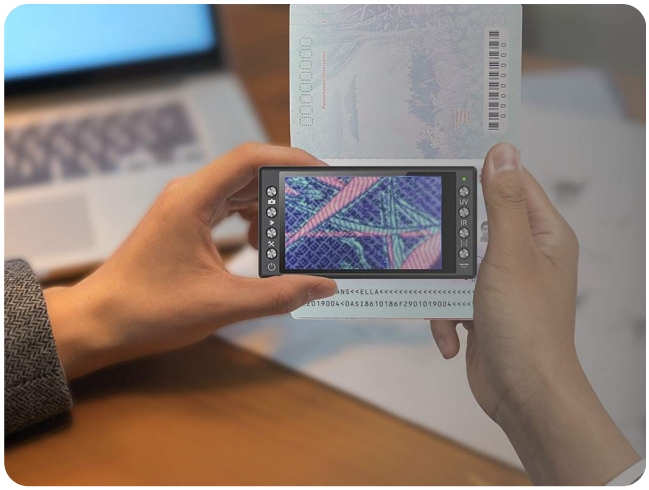
Border checks · Mobile inspection · Second-line examination



MULTI-LIGHT EXAMINATION

Four ways of looking at the same page

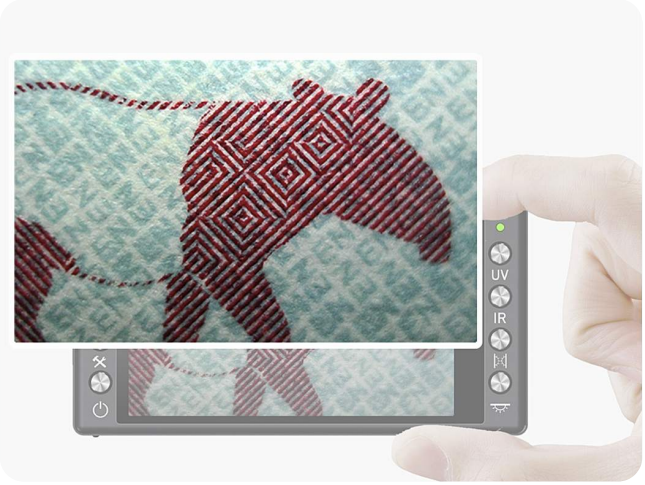
White light shows the page as printed; infrared reveals what survives when visible ink disappears; UV lights up the fluorescent features; external UV reaches the substrate and the watermark. Switching between them is a button on the side of the device.



AT THE CHECK

Held over the document, not the other way round

The officer holds the device over the page and reads the result on its own screen — at a counter, at a gate or in a vehicle lane, with nothing to set up first.



MAGNIFICATION

The detail that decides it

Intaglio relief, microprinted text and the line structure of a security print are enlarged far past what the eye resolves, so a convincing forgery separates from a genuine document.



EXTERNAL UV

Through the substrate, to the watermark

An external UV source works the light through the paper itself, bringing out the watermark and the features embedded in the substrate rather than printed on it.

DOCUMENT VERIFICATION

EagleEye IDMate

IDM5900

A multi-functional full-page document reader.



More on the site
idmetrix.eu/products/border-control/eagleeye-idmate

IDMate reads and verifies the identity documents a counter actually meets — passports and ID cards — with fast, accurate optical character recognition, RFID chip reading, barcode reading and smart card reading in one compact full-page unit. It is built for the places where identity has to be established in seconds and recorded correctly: government services, transportation hubs, hotels, telecoms and foreign institutions.

OCR, RFID, barcode and smart card in one reader

What it reads

Full-page scanning
The whole page is captured rather than the machine-readable zone alone, so nothing printed on it is lost.

Automatic document detection
A document placed on the reader is detected and captured without the operator starting the read.

400 PPI imaging
Capture at 400 PPI keeps the fine printing and the security features legible, for the automated recognition and for an officer's own inspection.

Chip, barcode and smart card
RFID tags, barcodes and smart cards are read alongside the printed page, so the electronic and the visual record are checked together.

Where it is used

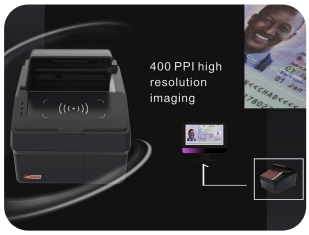
Government services · Transportation hubs · Foreign institutions · Hotels · Telecoms



FULL-PAGE SCANNING

The whole page, not just the machine-readable zone

A document placed on the reader is detected and captured automatically, full page, so the printed content, the portrait and the MRZ all arrive together — passports and ID cards alike.



400 PPI IMAGING

High resolution, and the chip read on the same surface

Imaging at 400 PPI keeps the fine print and the security features legible on screen, while the contactless zone on the top face reads the chip — the electronic and the printed record checked side by side.



CARDS AS WELL AS BOOKS

One reader for the documents a counter actually meets

ID cards, residence permits and driving licences are read on the same unit as the passport, with OCR, barcode and smart card reading behind them.

AI PASSPORT ANALYSIS

EagleEye Lite

IDM5930

Improving border management through efficient analysis of travel documents.



More on the site
idmetrix.eu/products/border-control/eagleeye-lite

EagleEye Lite captures the passport while the officer turns the pages: the images are taken automatically as the document is flipped, and AI identifies and analyses what they contain — the data page, the visa pages and the passport stamps. Compact and flexibly configured, it integrates with a passport reader, a PC or a screen, which is what makes it the model that fits an existing counter.

Captures automatically while the pages are flipped

What it does

Capture while flipping
The officer turns the pages and the device captures them, so no extra step is added to the inspection.

White light capture
Passport pages are captured under white light, the mode a full-page record is built from.

Flexible integration
Configured alongside a passport reader, a PC or a screen, so it takes its place at a counter that already exists.

AI analysis
Data page, visas and stamps are identified and analysed, and the travel record falls out of them.



THE WHOLE PASSPORT

Data page, visas and stamps, captured as the officer turns them

The images are taken automatically while the pages are flipped by hand, so a complete record of the document is built without adding a step to the inspection.



FLEXIBLE CONFIGURATION

Three ways to put it on a counter

Integrated with the system already in place, mounted on a passport reader, or paired with a PC and a screen — the compact design is what lets it take its place at a desk that already exists.



CAPTURE QUALITY

Close enough to read the security printing

White light capture at a resolution that keeps the microprinting and the guilloche legible, which is what both the analysis and the officer’s own inspection depend on.



FROM PAGES TO A RECORD

Biographic data, visas and stamps, extracted

The data page becomes fields, the visa becomes its type, validity and duration of stay, and the stamps become countries with entry and exit dates.

AI PASSPORT ANALYSIS

EagleEye Elite

IDM5910

Filling the gap in automatic and comprehensive passport data capture and identification.



More on the site
idmetrix.eu/products/border-control/eagleeye-elite

EagleEye Elite flips the passport automatically and analyses it with AI, capturing the data page, the visas, the stamps and the travel documentation around them. PC and screen are built into the unit, so a counter gains full passport analysis without gaining a workstation.

Automatic flipping, with PC and screen built in

What it does

Automatic page flipping
Pages are turned and captured by the machine, so a complete passport record is produced in one pass.

Three lights
White, infrared and ultraviolet capture, which is what security features and alterations show up under.

Built-in PC and screen
A compact design that carries its own computer and display, ready to work where there is only desk space.

AI extraction
Biographic data, visas and stamps are recognized and structured for the record and for the officer.



THE WHOLE PASSPORT

Data page, visas and stamps, without an operator turning them

Elite flips the passport itself and captures every page, so the record that reaches the analysis is the complete document rather than whichever page was held open.



THREE LIGHTS

White, infrared and ultraviolet on the same page

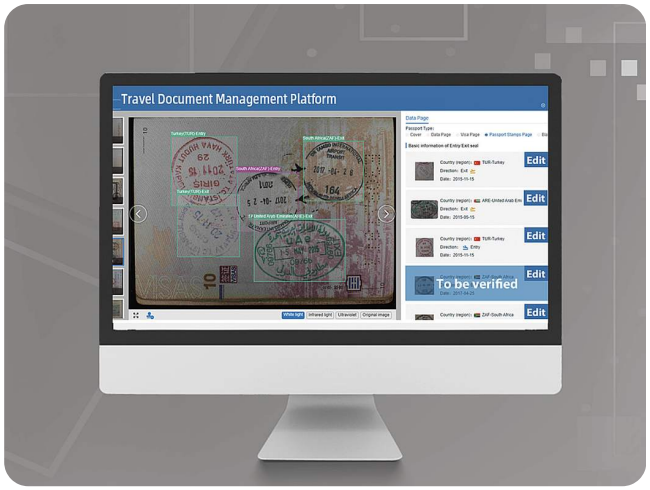
Each illumination shows something different: the printed content in white light, the infrared-visible layers, and the fluorescent security features under ultraviolet — which is what an alteration shows up against.



FROM PAGES TO A RECORD

Biographic data, visas and stamps, extracted

The data page becomes fields, the visa becomes its type, validity and duration of stay, and the stamps become countries with entry and exit dates — each traceable back to the image it came from.



TRAVEL DOCUMENT MANAGEMENT PLATFORM

Checked by an officer before it is relied on

Pages, illuminations and the seals read from them sit together in the platform, where an authorized operator confirms or corrects what the system identified.

AI PASSPORT ANALYSIS

EagleEye Pro

IDM5920

Improving border security and streamlining operations.

More on the site
idmetrix.eu/products/border-control/eagleeye-pro



EagleEye Pro turns the pages of a passport itself and captures every one of them, then uses AI to identify and extract what they hold — the biographic data of the data page, the visas, the stamps and the travel record they add up to. It is the fullest member of the EagleEye series: capture modes beyond white, infrared and ultraviolet light, and imaging in ultra-high definition.

Automatic page flipping, captured in ultra-high definition

What it does

Automatic page flipping
The passport is turned and captured page by page without an operator handling it, which is what makes a complete record practical.

Ultra-high definition capture
Imaging at the highest resolution in the series, so worn stamps and dense visas stay legible to the analysis.

Beyond three lights
Capture modes extend past white, infrared and ultraviolet light, widening what can be seen in a document.

AI extraction
Biographic data, visas, stamps and travel information are identified and structured automatically.



THE WHOLE PASSPORT

Data page, visas and stamps, captured in one pass
The pages are turned and photographed by the machine, and what comes back is the complete document — the data page, every visa and every stamp — ready for the analysis rather than for a second attempt at scanning.



THREE LIGHTS, AND MORE

White, infrared and ultraviolet on the same page
The same page under each illumination shows different things: the printed content in white light, the infrared-visible layers, and the fluorescent security features under ultraviolet. Pro captures beyond these three, so nothing in the document is out of reach.



ULTRA-HIGH DEFINITION

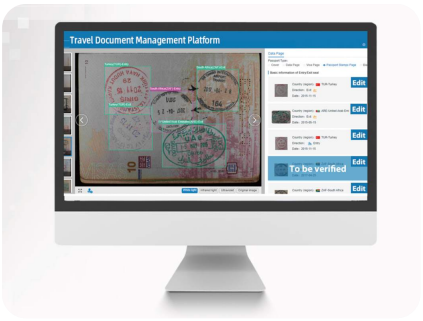
Close enough to read the security printing
Capture at the highest resolution in the series means the microprinting, the guilloche and the intaglio patterns survive into the image — which is what an authenticity judgement rests on.



FROM PAGES TO A RECORD

Every page turned into structured data

The data page becomes biographic fields, the visa becomes its type, validity and duration of stay, and the stamps become a list of countries with entry and exit dates — each one traceable back to the image it was read from.



TRAVEL DOCUMENT MANAGEMENT PLATFORM

Verified by an officer where it matters

Pages, lights and the seals read from them sit side by side in the platform, and what the system identified can be checked and corrected by an authorized operator before the record is relied on.

DOCUMENT MANAGEMENT SOFTWARE

Travel Document Management System

Every page of a passport, held together with what was read from it.

More on the site
idmetrix.eu/products/border-control/travel-document-management-system

The system keeps the captured passport and its analysis in one place: each page under white, infrared and ultraviolet light, and beside it the entry and exit seals found on it — the country, the direction of travel and the date. When it matters, an authorized operator verifies what the system identified, so the record is confirmed before anyone relies on it.

Analysed pages and verified seal data in one record

What the system holds

Page by page
The whole document is stored as captured, with the pages addressable individually rather than as one flat scan.

Entry and exit seals
Each stamp is read into a structured record — country, direction and date — and shown next to the image it came from.

Multiple illuminations
White, infrared and ultraviolet views of the same page are kept together, so an authenticity question can be re-examined later.

Operator verification
An authorized operator can confirm or correct what the system identified, which is what makes the data dependable.



DOCUMENT MANAGEMENT SOFTWARE

Automated Border Control System (ABCS)

Enhancing security and efficiency through advanced automation.



More on the site
idmetrix.eu/products/border-control/automated-border-control-system

Automated border control removes the time that manual document checks and identity verification take, so more passengers are processed in less time and the checkpoint stops congesting. The system reads the document, verifies the traveller biometrically, and opens the gate for exactly one person at a time.

One passage, one verified person

What the system provides

Smooth passenger flow
Queues and congestion are minimized, because the routine crossings no longer wait for a desk.

Advanced detection
A proven detection algorithm ensures a single person per passage, with robust tailgating detection.

Capture at the gate
A 400 DPI passport scanner, a fingerprint scanner with anti-spoofing detection and a CMOS HDR camera.

Biometric integration
Facial, fingerprint and iris verification identify the traveller quickly and accurately.

Built to stand in a hall
Stainless steel grade 304, an all-in-one motor rated beyond two million normal cycles, and an embedded industrial PC.

Administration and integration
Complete administration, monitoring and control capabilities, and straightforward integration with the backend system.

DOCUMENT MANAGEMENT SOFTWARE

Smart Counter Solution (SCS)

The counter, with the routine automated and the anomalies reported.

More on the site
idmetrix.eu/products/border-control/smart-counter-solution



The Smart Counter raises the security and the efficiency of a staffed crossing at once, at air, land, rail and sea borders. The AI-driven system verifies identity biometrically, analyses the travel document, checks its authenticity, enrolls biometrics and manages the passport stamps — and it actively reports the breaches that matter: a missed inspection, an unauthorized crossing, an incomplete stamping.

Anomalies reported, not just recorded

What the counter brings together

Central control terminal
Controls the eGates, the biometric enrolment devices, the screen, temperature, lighting, login, stamp management and blind-spot monitoring — with real-time alerts and officer duty management.

Passport analysis at the desk
EagleEye Lite reads and analyses the entire ePassport while the officer flips it.

Stamps under control
The temporary stamps locker tracks every stamp by RFID, verifies date and pattern by OCR, and alerts on a missed or duplicated stamping.

The passenger side
A smart inquiry terminal with more than 75 languages, a biometric enrolment device for face and 4-4-2 fingerprints, and the border control eGate itself.

Peripherals
Inspection lighting in white and ultraviolet, a passport cancellation machine, and machine-learning tailgating video detection.

Built around the officer
Environmental settings are customized to the inspector, in a position designed to be worked in for a full shift.

SECTION 05

Banking

Card issuance and authentication hardware for financial institutions.

START HERE

Self-Service Banking Solution

Opening an account and walking out with the card, in minutes and at any hour — the application, the identity check and the card personalization all handled at one unattended kiosk.

Identify → **Verify** → **Apply** → **Personalize** → **Collect**

Card Personalization

High-speed lines that encode, print and verify payment, loyalty and ID cards at bureau volumes.

DoD DeskCard IDM6701 · desktop personalization 79

DoD ProCard IDM6823 · centralized issuing 81

DOD Card Personalization System IDM6820 · up to 6000 cph 83

Instant Issuance

Unattended kiosks that take the application, personalize the card and hand it over in the branch, in minutes.

Bank Card Instant Issuance Kiosk IDM6891 · unattended branch issuing 85

CARD PERSONALIZATION

DoD DeskCard

IDM6701

Decentralized drop-on-demand personalization for card issuance.



More on the site
idmetrix.eu/products/banking/dod-deskcard

Not every card programme should run through a central bureau. DoD DeskCard puts drop-on-demand personalization on a desk: UV inkjet printing in monochrome or full colour, edge to edge, with a transparent protection layer applied over the whole card or only where it is needed. Images, text, numbers, barcodes and QR codes go onto financial, membership, health and student cards — and because the consumables are inexpensive and the maintenance simple, the cost per card sits well below thermal transfer.

UV inkjet at up to 1200 dpi

1200 dpi	Edge to edge	PVC · PC · metal	Desktop
Print resolution	Printable area	Card materials	Footprint

Bureau-grade cards, made at the desk

Drop-on-demand UV inkjet
Ink is placed only where the design calls for it, in monochrome or full colour, and cured on the card — no ribbons, no transfer film.

Up to 1200 dpi
Enough resolution for photographic artwork, fine text, barcodes and QR codes that scan first time.

Edge-to-edge printing
The design runs to the card edge rather than stopping at a white border, which is what separates an issued card from a printed one.

Selective protection layer
A transparent protective coat is applied across the full surface or over chosen areas only — useful where a signature panel or a chip has to stay clear.

Data encoding
Information personalization and encoding run in the same pass as the printing, so the card leaves the desk complete.

Lower cost per card
Inexpensive consumables and straightforward maintenance bring running costs down substantially against thermal transfer, without giving up print quality.

Cards personalized

Financial cards · Membership cards · Health cards · Student cards



BRILLIANT COLOUR, DURABLE RESULTS

Photographic quality that survives the wallet

Up to 1200 dpi delivers vivid colour, and UV curing fixes the ink to the card so the artwork lasts as long as the card does rather than fading through its validity period.



VERSATILE AND RESILIENT

Whatever the card is made of

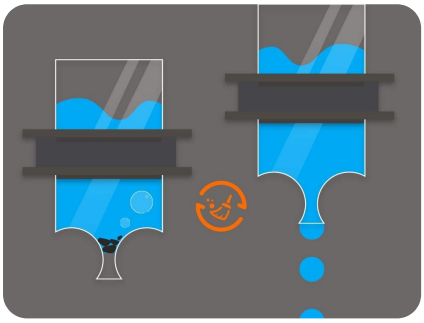
Various card thicknesses and materials — PVC, PC, metallic and others. A premium metal card and a standard PVC member card come off the same machine.



CUSTOMIZABLE AND ADAPTABLE

Configured now, extended later

A modular build means the machine is specified for today's volume and function set, and modules are added when the programme grows rather than replacing the unit.



INTELLIGENT INK PURGE

Nozzle clogs are a thing of the past

Blocked nozzles are the usual failure of inkjet personalization. The purge system clears the head automatically, so the first card of the morning prints like the last card of the afternoon.



SIMPLE AND INTELLIGENT WORKFLOW

Deployed without a project

Easy deployment and seamless operation — the unit is set up where the cards are issued rather than requiring a bureau environment built around it.



LOW OPERATIONAL COSTS

The economics that make local issuing work

Lower consumable costs without sacrificing quality or performance. It is the running cost, not the machine price, that decides whether decentralized issuing is worth doing.

CARD PERSONALIZATION

DoD ProCard

IDM6823

Industrial drop-on-demand personalization for high-volume card issuance.



More on the site
idmetrix.eu/products/banking/dod-procard

DoD ProCard is an industrial-grade drop-on-demand personalization system built for the volumes a central bureau issues. UV inkjet lays down monochrome or full colour at up to 1200 dpi, edge to edge, and a transparent protection layer can be applied over the whole card or only where it is needed. Images, text, numbers, barcodes and QR codes go onto financial, membership, health and student cards — at a running cost well below a thermal transfer line, because the consumables are inexpensive and the maintenance is straightforward.

Up to 1200 dpi, edge to edge

1200 dpi	Edge to edge	Mono + colour	Modular
Print resolution	Printable area	Print modes	System configuration

Bureau throughput without bureau running costs

Drop-on-demand UV inkjet
Ink is placed only where the artwork calls for it and cured on the card by UV — no ribbons, no transfer film, and nothing consumed on the parts of the card that stay blank.

Up to 1200 dpi, edge to edge
Photographic images, fine text, numbers, barcodes and QR codes, printed right to the card edge rather than stopping at a white border.

Monochrome or full colour
The same machine runs a black-and-white data card and a full-colour artwork card, so one line covers the whole product range.

Selective protection layer
An optional transparent protective coat is applied across the full surface or over chosen areas only — useful where a signature panel or a chip has to stay clear.

Modular system configuration
Input, encoding, printing and OCR modules are specified for the programme in hand and added later as volumes grow.

Monochrome variant: DoD MonoCard
Where colour is not needed, the IDM6821 DoD MonoCard prints black and white only, at a substantially higher production speed and a lower cost per card.

Cards personalized

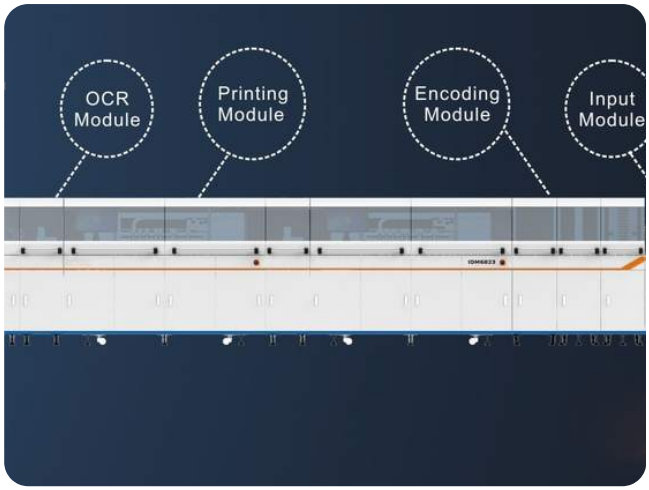
Financial cards · Membership cards · Health cards · Student cards



HIGH RESOLUTION AND VIVID COLOURS

Artwork that survives the wallet

Up to 1200 dpi of drop-on-demand ink-jet, printed edge to edge and cured by UV, so the design is fixed to the card rather than fading across its validity period.



MODULAR AND INTELLIGENT DESIGN

Fully flexible for system configuration

Input, encoding, printing and OCR each sit in their own module along the line. The configuration is set to the card products being issued, and extended module by module rather than by replacing the machine.



FULLY AUTOMATIC

Simple workflow, easy operation and maintenance

Blank cards go in at one end and finished cards come out at the other. The line runs unattended between loads, and the maintenance it does need is the kind a bureau operator handles without a service visit.



COST-EFFECTIVE CONSUMABLES

The running cost is what decides the programme

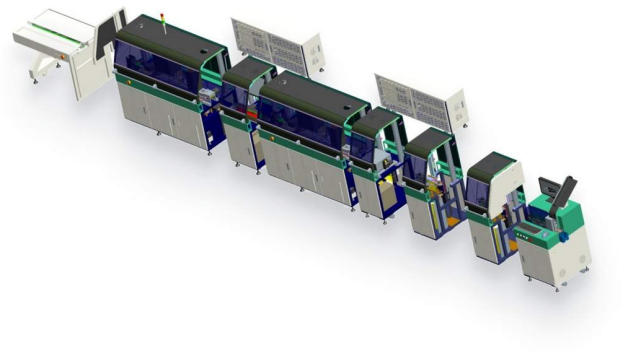
Ink is cheaper than ribbon and transfer film, and drop-on-demand uses only what the design needs. Against a thermal transfer system the cost per card falls substantially without giving up print quality.

CARD PERSONALIZATION

DOD Card Personalization System

IDM6820

High-speed drop-on-demand personalization for payment, loyalty and ID cards.



More on the site
idmetrix.eu/products/banking/dod-card-line

The IDM6820 is a drop-on-demand card personalization line for card bureaus and issuers. Cards are encoded, printed and verified in a single pass at up to 6000 an hour, and because each module is controlled separately the same line handles payment cards, loyalty cards and ID cards.

Up to 6000 cards per hour

6000 CPH	8 + 8	3 tracks	1000 cards
Production speed	Contact & contactless heads	Magnetic encoding	Input magazine

Built for card bureau throughput

Drop-on-Demand UV Inkjet
Single-pass printing with plasma surface treatment and UV-LED curing, covering the card edge to edge.

High-Speed Chip Encoding
A vertical-lift design with eight contact stations, expandable to sixteen, alongside eight contactless stations.

Magnetic Stripe Encoding
All three ISO 7811 tracks in HiCo and LoCo, including transparent and embossed cards.

OCR on Every Print Module
Each printing module carries its own OCR, with two QC modules checking barcodes and digits before collection.

Wide Material Compatibility
PC, PVC, ABS, PET, PETG and composite cards from 0.6 to 1.0 mm, including SIM carriers.

Module-by-Module Control
Every module can be switched on or off in software, so one line runs several card products.

One pass, eight stations

Cards run the length of the line once: encoded, printed on both sides, checked after each print, and separated if anything fails.

1. **Card input** 1000-card magazine
2. **Chip encoding** Contact and contactless
3. **Magnetic encoding** Three ISO 7811 tracks
4. **Front printing** With OCR check
5. **Flipper** Card turned over
6. **Rear printing** With OCR check
7. **Rejection** Failed cards diverted
8. **Collection** Finished cards out

Documents supported

Payment cards | Loyalty cards | ID cards | SIM carriers

Technical specification

PRODUCTION

Production rate	Up to 6000 cards per hour
Card materials	PC, PVC, ABS, PET, PETG and other composite materials
Card size	ISO/IEC 7810 ID-1, 30 mil (±10%) Thickness 0.6–1.0 mm
Card types	Mini-SIM, nano-SIM and micro-SIM embedded in ISO 7810 ID-1 sheets

MODULES

Input module	Capacity: 1000 cards Arc-shaped magazine reduces pressure on the card stack Designed to limit noise and surface scratching
Chip encoding	Contact: 8 heads, expandable to 16 (configured before delivery) Contactless: 8 heads Standards: ISO/IEC 7816 and ISO 14443 type A/B
Magnetic encoding	3 tracks to ISO 7811, HiCo and LoCo Reads transparent and embossed cards
Printing	Single-pass UV inkjet, 2 UV colours (black and white) Up to 2 printing heads per module Plasma surface treatment for ink adhesion, UV-LED curing Edge-to-edge printing, tolerance 0.5 mm Graphics, text, numbers, barcodes, 2D and Datamatrix codes, logos
Quality check	Two OCR modules Barcode and digit verification

SYSTEM

Dimensions	7500 × 800 × 1600 mm (L × W × H)
Power supply	AC 220–240 V, 50/60 Hz 5 kW
Compressed air	6 bar
Noise	85 dB
Operating environment	Temperature 0–35 °C Humidity 5–95% RH, no condensation

INSTANT ISSUANCE

Bank Card Instant Issuance Kiosk

IDM6891

One-stop banking services completed within minutes, from application to issuance.

More on the site
idmetrix.eu/products/banking/card-instant-issuance-kiosk



A customer applying for a card normally leaves the branch empty-handed and waits for the post. This kiosk closes that gap: it takes the application at a touch screen and pin pad, personalizes a card on the spot — embossed, indented, printed and encoded — and issues it, unattended, in under a minute. New cards and replacements both, with a printed receipt to leave with.

A personalized card in under a minute

< 1 min	24/7	EMV	2-sided
Application to card in hand	Unattended service	Latest card standards	Colour and mono printing

A card bureau in the footprint of an ATM

Instant issuance
New cards and replacements are applied for and collected in the same visit, in less than a minute — no postal wait and no second trip to the branch.

Dual-sided printing
Colour and monochrome flat printing on both faces, so card artwork and the reverse are produced in the machine.

Self-service by design
A touch screen and pin pad carry the applicant through the process, and an integrated receipt printer gives them a record of the card they have just been issued.

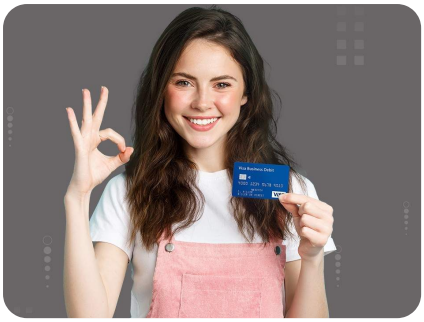
Embossing and indenting
Raised card numbers and indented characters to the quality a financial institution expects, not just a flat print.

Chip and stripe encoding
Contact and contactless chip encoding alongside magnetic stripe, so the card leaves the kiosk ready to transact.

Refilled in minutes
Card stock and consumables are reached through a user-friendly service layout, so keeping a kiosk stocked is a routine task rather than a service call.

Modules available

Camera · Fingerprint scanner · ID document reader · Keyboard · Receipt printer · Contactless and contact chip encoder · Magnetic stripe encoder · Expandable card storage



ONE-STOP UNATTENDED BANKING

Applied for and issued in the same minute

Self-service applications for new cards or replacements, with instant issuance in less than a minute. The branch stops being a place where a card is ordered and becomes the place where it is handed over.



CUTTING-EDGE PRINTING

A card that looks issued, not printed

High-quality embossing and indenting, and dual-sided printing of vivid images on the card. What comes out of the kiosk matches what a central bureau would produce, which is the condition for issuing it at the counter at all.



EMV COMPLIANT

Ready for the payment network

Cards issued adhere to the latest EMV standards, so security and compatibility with global payment systems are settled before the customer walks out with the card.



VERSATILE AND CONFIGURABLE

Built to the branch's process

Camera, fingerprint scanner, ID document reader, keyboard, receipt printer, chip and magnetic stripe encoders, expandable card storage — the module set is chosen for the institution's onboarding rules rather than fixed at the factory.



EASY TO MAINTAIN

Refilling is branch staff work

The service layout is designed so that refilling card stock or replacing consumables is something a member of branch staff does in a few minutes, which is what keeps an unattended kiosk actually available.



KIOSK MANAGEMENT SYSTEM

Every kiosk on one screen

Administrators manage the whole estate from a single interface — status, stock levels and configuration across every branch, rather than one machine at a time.

SECTION 06

Government Services

Digital platforms for public authorities: foreign worker registration, electronic visa issuance and KYC onboarding, from online application to verification in the field.

Labour Registration

Registration, credentialing and verification of foreign workers — the person, the passport, the biometric identity and the employment record joined in one trusted record.

Labour Registration System · registration, credentialing and verification 88

Electronic Visa

The national eVisa lifecycle on one platform: online application, payment, officer decision, digital issuance and secure verification at the border.

eVisa System · application, decision, issuance, verification 90

KYC and Digital Credentials

National onboarding and verification on one platform: KYC application, payment, officer decision, digital credential issuance and secure verification.

KYC Registration and Verification · onboarding, digital credentials, verification 91

GOVERNMENT SERVICES

Labour Registration System

Digital registration, credentialing and verification of foreign workers on one secure, configurable government platform.

More on the site
idmetrix.eu/products/government-services/labor-registration-system

Foreign worker registration requires more than collecting personal information. Authorities need to reliably connect the person, their passport, their biometric identity, their employment data and their current registration status — and keep that link trusted over time. The Labour Registration System holds all of it in one authorized record, from the first online registration to every later verification in the field.

One registration platform, three deployment models

6 steps	3 models	1:1 + liveness	IDMETRIX ABIS
From passport to registered worker	Biometric, signed VDS, card	Live face verification	Face-based identification

Core platform capabilities

Digital Registration Portal
Online self-service registration, configurable around the personal, employment and supporting data required by the responsible authority.

MRZ Reading and Validation
The Machine Readable Zone is parsed automatically: structure and check digits are validated, MRZ data is compared with OCR data, and inconsistencies are flagged for review.

Central Registration Record
Personal, passport, biometric, employment and status data, together with portal data and system history, maintained in one authorized record — one source of truth.

Verification in the Field
Labour inspectors, government officers and other approved users confirm who the person is, whether they are registered, which official record belongs to them and what their current status is.

Configurable by Design
A configurable technology platform, not a fixed one-size-fits-all product. The responsible authority defines the rules; IDMETRIX provides the technology to implement them within one coherent platform.

Automated Passport OCR
The passport data page is uploaded once. Printed data is extracted automatically into the registration fields, with no manual re-entry; the applicant reviews the result and corrects any misread character.

Live Face Verification and Enrolment
Liveness detection and a 1:1 match against the passport portrait. Following successful verification, the facial biometric is enrolled into the authorized database used for IDMETRIX ABIS identification.

Registration Number / Reference
Each registered worker receives a unique registration number or reference linked to their digital profile. It can be delivered electronically and retained on a mobile device.

Role-based Access
Each officer, inspector or authorized organization sees only the categories of information permitted for their role — identity data, passport details, registration status or employment-related information.

One platform. Three deployment models.

The same core registration process — digital registration, passport OCR and MRZ validation, facial biometrics and the central record — supports three deployment models. The responsible authority selects the one that fits its regulatory, operational and security requirements, and can extend from one to the next.

1 · Biometric Digital Registration

Facial recognition is the sole identification modality, powered by IDMETRIX ABIS. An officer captures the worker's face in a mobile or web application; the search of the authorized facial database locates the registered worker record, and the officer receives the information authorized for their role. No QR code and no physical card are required.

2 · Digitally Signed VDS Credential

A Visible Digital Seal (VDS) issued as a protected, portable QR credential. It is digitally signed with a certificate issued under the Ministry of Labour's Certificate Authority, so the origin of the credential can be verified and any unauthorized modification of the signed data is detectable. VDS data content is configurable per project.

3 · Physical Worker Credential

A plastic ID card or smart card, where required by legislation, with visible identification information and optional machine-readable or electronic functionality. It is issued from the same registration platform and backed by the same central digital identity record.

The complete worker identity lifecycle

One technology foundation carries the worker from passport to trusted record. Automated data capture and validation reduce manual entry, improve data quality and flag inconsistencies before a record is created.

1. **Capture** Passport and registration data
2. **Validate** OCR and MRZ processing
3. **Enrol** Liveness, 1:1 match, facial enrolment
4. **Register** Official worker record
5. **Issue** Reference, VDS or physical credential
6. **Verify** Trusted record connection

Configuration, integration and delivery

DEFINED BY THE RESPONSIBLE AUTHORITY

Registration policy	Who must register, and under which conditions
Data requirements	Which personal, passport, employment and supporting data is collected
Deployment model	Biometric-only registration, signed VDS, plastic card or smart card
Access rights	Which officers and organizations may access which data categories
Operational processes	How registrations are created, reviewed, updated and verified
Trust infrastructure	How credentials are issued and digitally signed within the national trust environment

DESIGNED TO INTEGRATE

Potential integrations	National identity and population registries Immigration and residency systems Border management Employment and company registries National biometric / ABIS systems Watchlists and authorized government databases Inspection and enforcement applications Government digital services
Scope	The platform can begin as a focused registration and verification system and evolve as national requirements develop. Integrations depend on project requirements, existing infrastructure and the systems made available by the customer.

DELIVERY MODELS

Technology provider	IDMETRIX provides the core registration, passport-processing, biometric, credential and verification technologies
Solution partner	IDMETRIX works with the customer and project participants to define and implement the complete registration workflow
Integration partner	The platform connects with existing identity, labour, immigration, border and government infrastructure
Partner to local integrators	Local and regional partners incorporate IDMETRIX technology into a broader national solution, combining identity expertise with local market knowledge and delivery capability

GOVERNMENT SERVICES

eVisa System

From online application to secure border verification.

More on the site
idmetrix.eu/products/government-services/e-visa-system

A complete national eVisa platform for application, payment, officer decision, digital issuance and secure border verification. Digitalization is inevitable; the real question is how to achieve it without a multi-year, high-risk IT transformation. The platform starts as a working national eVisa system on existing infrastructure, with integrations and automation added as requirements evolve — and government control retained throughout.

Digitally signed eVisa with ICAO Visible Digital Seal

5 stages	~8 weeks	ICAO VDS	24/7
Application to border, one platform	Target deployment	Verified at the border	Availability

One platform for the entire eVisa lifecycle

Online Application
Individuals, travel agencies and companies apply, upload documents, pay and receive the eVisa entirely online, reducing reliance on in-person application processes.

Face Matching and Liveness
The passport photo is compared with a live selfie, and liveness is confirmed before the application moves on.

Officer Review Workflow
Structured digital workflows carry every application from submission through review, decision and issuance. Officers approve, reject or request more information.

ICAO VDS Verification
An ICAO Visible Digital Seal lets the border confirm the authenticity of the document and the issuing authority.

Immutable Audit Trail
Every action is logged with full case history, and records cannot be modified.

OCR and MRZ Validation
Passport fields are read automatically from the data page. Check digits are verified, OCR and MRZ data are cross-checked and the expiry date is confirmed.

Integrated Online Payment
Payment through third-party providers, supporting international card schemes — Visa, Mastercard, American Express, UnionPay — and local payment methods where required.

Signed eVisa
The eVisa is issued as a tamper-evident secure PDF. It is digitally signed, so any modification is revealed.

Status and Revocation Checks
Current validity is checked against the eVisa system at every verification, and revoked visas are identified.

GOVERNMENT SERVICES

KYC Registration and Verification

From online application to secure verification.

More on the site
idmetrix.eu/products/government-services/kyc-registration-and-verification

A complete national platform for onboarding and verification, covering KYC application, payment, officer decision, digital credential issuance and secure verification. Digitalization is inevitable; the real question is how to achieve it without a multi-year, high-risk IT transformation. The platform starts as a working national system on existing infrastructure, with integrations and automation added as requirements evolve — and government control retained throughout.

Digitally signed eCredentials with ICAO Visible Digital Seal

5 stages	~8 weeks	3 models	24×7
Application to verification	Target deployment	Biometric, signed VDS, card	Availability

One platform for onboarding and verification

Online Application
Individuals, agencies and companies apply, upload documents, pay and receive their credential entirely online, reducing reliance on in-person application processes.

OCR and MRZ Validation
Passport data is read automatically from the data page and checked: check digits verified, OCR and MRZ cross-checked, expiry confirmed.

Face Matching and Liveness
The passport photo is compared with a live selfie, and liveness is confirmed before the application moves on.

Integrated Online Payment
Payment through third-party providers, supporting international card schemes — Visa, Mastercard, American Express, UnionPay — and local payment methods where required.

Officer Review Workflow
Structured digital workflows carry every application from submission through review, decision and issuance. Your officers approve, reject and revoke.

Signed eCredential
The credential is issued as a tamper-evident secure PDF. It is digitally signed, so any modification is revealed.

ICAO VDS Verification
An ICAO Visible Digital Seal lets the verifier app confirm the authenticity of the credential and the issuing authority.

Status and Revocation Checks
Current validity is checked against the credential issuing system at every verification, and revoked credentials are identified.

Immutable Audit Trail
Every action is logged with full case history, and records cannot be modified.

Applicable for

Financial Services · Telecommunications · Education · Events · Public Security · eVisa / ETA

SECTION 07

Transportation

Fare collection, dispatch and operations systems for city buses, rail transit and taxis.

City Bus Solutions

Payment on board and control behind it: ticketing terminals at the door, and the dispatching and operation systems that run the fleet.

Ticketing Terminals · SmilePay, IDM5210, IDM5212 93

Dispatch and Operation · dispatching system and SaaS platform 95

Rail Transit Solutions

Automatic fare collection at the gate — the gate itself, the readers inside it, and the module that handles single-journey tickets.

Smart eGate · bi-directional facial recognition 97

Fare Payment Processing · AFC reader, ticket module, all-in-one reader 98

Smart Taxi Solutions

Ride-hailing, order acceptance and real-time supervision, from the on-board terminal to the operator's command platform.

Operations Management Services · ride-hailing, dispatch and supervision 100

CITY BUS SOLUTIONS

Ticketing Terminals

Three terminals for the door of the bus — from a face to a banknote.

More on the site
idmetrix.eu/products/transportation/ticketing-terminals



Fare collection on a city network has to accept whatever the passenger is carrying: a transit card, a bank card, a code on a phone, a face, and in many places still cash. Three terminals cover that range — SmilePay for face payment, IDM5210 as the everyday validator, and IDM5212 where notes and coins must be taken as well — all reporting to the same back end and all positioned on the route.

Face, card, NFC, QR code and cash

What the terminals do

Multiple payment options
Public transit card, bank card, NFC and QR code payments are supported across the range, with face payment on SmilePay and cash on IDM5212.

Contactless payment
A safe and secure way to pay without touching any buttons or screens — the queue keeps moving and nothing is handled in common.

Liveness detection
SmilePay's binocular camera supports liveness detection, so a face presented to the terminal is a person rather than a photograph.

Cash recognized and counted
IDM5212 recognizes coins and banknotes for denomination and authenticity, calculates the fares collected and transmits the data to the back end in real time.

Advanced positioning
Dual-mode GPS/BeiDou positioning ties every transaction to where on the route it happened; 4G, WiFi and Bluetooth keep the terminal connected.

Intelligent device management
The back end monitors the online and working status of each module — how often the cash box has been opened, payment methods used, device exceptions, overflow warnings.

The three terminals



SmilePay

An Android-based contactless payment terminal that supports face payment. Multiple payment options — face, transit card, bank card, NFC and QR code. A binocular camera gives liveness detection; a 7-inch display carries the interface. Easily mountable on board or in a station, with dual-mode GPS/BeiDou positioning.



IDM5210

The versatile payment terminal, powered by a Linux operating system. Transit card, bank card, NFC and QR code payments on a 5-inch display; 4G communication, GPS positioning and wireless functions such as WiFi and Bluetooth; dual-mode GPS/BeiDou positioning.



IDM5212

All-in-one payment terminal for seamless travel. Cash alongside transit card, bank card, NFC and QR code; coins and banknotes recognized for denomination and authenticity; fares counted automatically and reported in real time; each module monitored from the back end; a double-locking mechanism with both an electronic and a mechanical lock.

Accepted credentials

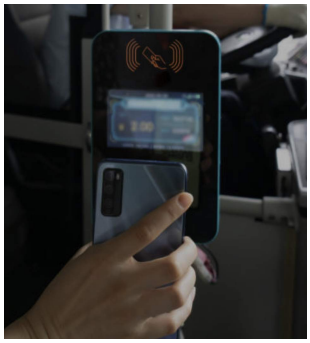
Face · Public transit card · Bank card · NFC · QR code · Cash



A CODE FROM THE PHONE

The fare, the card reader and the scanner on one face

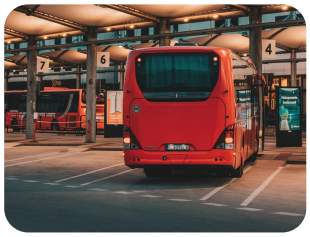
The passenger sees the fare on the screen, touches a card to the pad above it or holds a code to the scanner below — one terminal, whichever credential the person happens to carry.



TAP AND GO

Paid for in the time it takes to walk past

Mounted at the door, beside the driver or on a stanchion, the terminal takes the fare in the few seconds a boarding queue allows.



ON THE ROUTE

The same terminal in the depot and at the stop

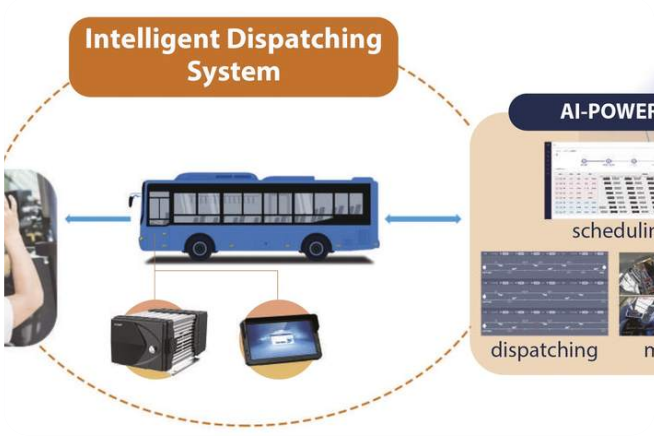
The units are easily mountable for on-board payment or installation in stations, so one family of terminals serves both ends of the network.

CITY BUS SOLUTIONS

Dispatch and Operation

The fleet adjusted to the demand it is actually carrying, and the money behind it settled in one place.

More on the site
idmetrix.eu/products/transportation/dispatch-and-operation



The intelligent dispatching system is the core component of the Intelligent Bus SaaS Platform. It collects, transmits and processes information about buses, passenger flow and road conditions, and monitors and dispatches the fleet in real time on that basis — so the operational status of buses follows actual need rather than a timetable written months ago. Around it, the all-in-one operation system carries card issuance and key management, clearing and settlement, customer service, business management, communication and reporting, for buses, subways, BRT and taxis alike.

Dispatch driven by passenger flow, not the timetable

What the platform does

Accurate dispatch
Passenger demand is managed through big-data layering, offering a range of precise dispatching methods rather than a single rule.

Video and GIS monitoring
Location and video together give visualized management and dynamic monitoring of how the vehicles are actually running.

Clearing and settlement
Transaction records from every mode are processed, cleared and settled, with accurate reconciliation against multiple third-party payment platforms — financial cards, QR code payments and the scheme's own card in one set of books.

AI-powered real-time dispatch
Passenger flow prediction, traffic condition prediction and resource forecasting feed an intelligent schedule that changes with the day.

Safety warning
Online and offline analysis of passenger flow changes, vehicle conditions, road conditions and driver conditions provides early anomaly detection and emergency response plans.

Issuance, service and reporting
Public key management, card issuance, customer service, business management, communication and report query systems sit on the same platform as the money, so an operator answers questions from one place.

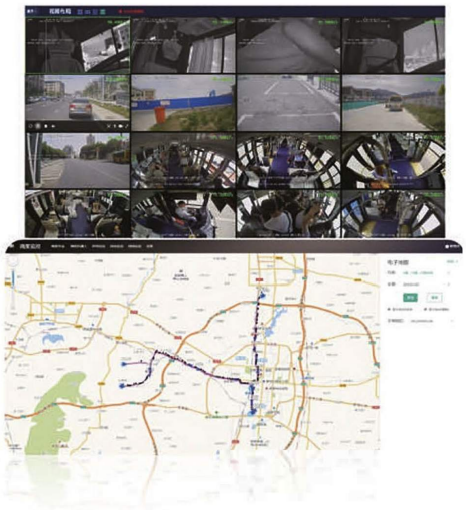
What each terminal carries

Intelligent Dispatching Screen (Standard)

An Android-based, screen-integrated on-board terminal for bus dispatching, driver attendance, vehicle positioning, data collection and anomaly alarms. Real-time location over GPS, BeiDou and hybrid positioning; four camera interfaces for interior and road conditions; automatic and manual next-stop announcements; single-sided and cluster scheduling; I/O data collection for door, ticket box and reverse status.

Multi-functional Dispatching Terminal (Advanced)

An intelligent terminal combining scheduling, management and monitoring, with remote bus scheduling, data collection, real-time video monitoring and playback analysis from a central database. Twelve camera interfaces; an AI algorithm that analyses driver behaviour and assists driving; CAN data and equipment status collection; forward collision, lane departure, pedestrian collision and overspeed warnings; built-in 4G for real-time transmission of location, vehicle status, alarms, audio and video.



VIDEO AND GIS MONITORING

The fleet as it is running, not as it was planned

The camera grid and the route map are read together — where each vehicle is, and what is happening inside it — so a dispatcher acts on the road rather than on the schedule.

RAIL TRANSIT SOLUTIONS

Smart eGate

The fare gate that recognizes the passenger in both directions.

More on the site
idmetrix.eu/products/transportation/smart-egate



The Smart eGate is the passenger-facing end of automatic fare collection: a bi-directional swinging-door gate with facial recognition on both faces, through-beam sensors that decide logically whether a person has entered or left, and remote intercom and operation for the times something needs a human. It accepts a face, an ID card or a QR code, and photographs the passenger when a code is used to open it.

Face, ID card or QR code, in either direction

How the gate works

Bi-directional facial recognition

Recognition works in both directions, matched to a bi-directional swinging-door design, so one gate serves entry and exit.

ID card recognition

An ID card is accepted at the gate, so a passenger without a transit credential is not sent back to a counter.

Photo on QR passage

A photo is captured automatically when a passenger scans a QR code to open the gate, tying the passage to a face after the fact.

Logical passenger control

Through-beam sensors track the passage itself, giving logical control of passenger entry and exit rather than a simple open-and-close.

Remote intercom and operation

Local gate control enables remote intercom and remote operation, so a station supervisor resolves a stuck passage without walking to the gate.

Accepted at the gate

Face · ID card · QR code · Transit card



IN THE STATION

A gate line that keeps the platform moving

The gate array is what stands between the concourse and the train, and the speed of the check there decides whether a peak-hour crowd reaches the platform before the doors close.

RAIL TRANSIT SOLUTIONS

Fare Payment Processing

What happens inside the gate, in the moment a ticket is presented.



More on the site
idmetrix.eu/products/transportation/fare-payment-processing

A fare gate is only as good as the units behind its panels. Three of them do the work: the AFC reader, which reads whatever credential the passenger presents; the ticket transmission module, which physically receives, reads and routes a single-journey ticket; and the all-in-one reader, which folds the industrial control computer into the reader itself. Together they decide whether a peak-hour crowd clears or queues.

Reading range ≥ 10 cm, transition time ≤ 300 ms

What the gate does with a ticket

Wide and effective reading range
A reading distance of 10 cm or more, with no blind spots, so a card is read where the passenger naturally presents it.

Fast payment
Transition time of 300 ms or less — the difference between a queue that moves and one that does not.

Multiple payment methods
Transit cards, financial cards, NFC, digital currency and QR codes are all accepted by the same reader.

Advanced identity verification
ID card reading is supported, applied for example to enable free rides for the elderly against the identity rather than a separate pass.

Single-journey tickets handled
The paper ticket is received, read and routed — out through the outlet when recognized, back to the inlet when not — in a mechanism built waterproof and proof against reverse insertion.

Reader and controller in one
Folding the industrial control computer into the reader removes a box from every gate, removes the communication hop between them, and shortens how long a change to ticket operations takes to build.

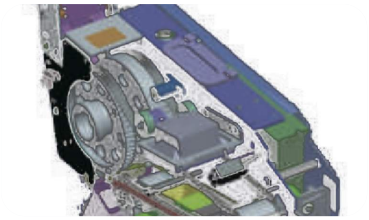
The three units

One reads the credential, one handles the paper ticket, and one removes a whole layer of hardware from the gate.



Automatic Fare Collection (AFC) Reader

Fast transaction and high accuracy in card reading, with a wide and effective reading range and no blind spots — a reading distance of 10 cm or more and a transition time of 300 ms or less. RS232, USB and Ethernet interfaces; transit cards, financial cards, NFC, digital currency and QR codes; and ID card reading, applied for example to enable free rides for the elderly.



Ticket Transmission Module

Receives a single-journey ticket, reads the information on it and conveys it to a designated location — ejected through the ticket outlet when recognized, returned to the inlet when not. A waterproof disk and one-way valve plate keep water out; an intelligent valve plate prevents reverse insertion; tickets and cards are recognized by contactless read or OCR scanning.



All-in-One Reader

Integrates an industrial control computer with the reader, replacing the traditional setup of a separate computer and a separate ticket reader. Compact enough to reduce installation space inside the gate; no communication lag, so transactions are processed and recognized quickly; large AFC files such as blacklists and fare schedules download instantly; and a unified development environment shortens the cycle for changing ticket operations.

Accepted credentials

Transit card · Financial card · NFC · Digital currency · QR code · ID card · Single-journey ticket

SMART TAXI SOLUTIONS

Operations Management Services

Convenient ride-hailing, efficient order acceptance, precise supervision.



More on the site
idmetrix.eu/products/transportation/operations-management-services

Smart Taxi Solutions are built on a three-tier architecture of intelligent peripherals, smart terminals and service platforms, which together give a taxi operator one monitoring and dispatch command platform. Real-time vehicle status, driver behaviour, dispatching and pricing are overseen from it, and an online ride-hailing and calling platform sits in front of it for the passenger. The aim is a fleet that is more efficient to run, safer to operate and easier to drive for.

From the street to the command platform

Intelligent peripherals
Top lights, fare meters, LED displays, cameras and the emergency button — the equipment in the vehicle that the rest of the chain reads.

Ride-hailing service
A ride-hailing app and mobile platform bring the passenger to the fleet directly, rather than leaving the trip to chance on the street.

Order acceptance and confirmation
The order reaches the driver on the on-board terminal and is confirmed there, so the trip is agreed before the vehicle moves.

Real-time supervision
Vehicle status, driver behaviour, dispatching and pricing are supervised live from the operator's command platform.

Driver behaviour and safety
Driving status monitoring, alarm monitoring, video surveillance and emergency command and dispatch are part of the same platform.

Operations and maintenance
Vehicle condition supervision, complaint management, inspection management and statistical reports close the loop on running the fleet.

The smart on-board terminal

The terminal in the vehicle is Android-based and handles information collection, processing, storage, transmission, display and control — ride-hailing applications, video monitoring and playback, SMS card insertion, document display, order acceptance, QR code payment, intelligent navigation, voice broadcasting and service evaluation. It comes in a built-in version and a desktop version.

Remote control and pricing
Devices are supervised remotely, with price control based on driving distance. CAN price control integrates onboard computer raw data, enabling verification assistance against positioning information.

Peripherals and interface
Multiple peripherals in the vehicle — top lights, fare meters — are managed as one. An LCD screen supports multi-touch and physical buttons, for a driver wearing gloves in traffic.

Positioning and supervision
GPS, BeiDou and hybrid positioning modes provide real-time time, latitude, longitude and speed. The taxi supervision system carries this into remote management, command and dispatch, and driver supervision.



RIDE-HAILING SERVICE

The passenger finds the taxi, not the other way round



ORDER ACCEPTANCE AND CONFIRMATION

The trip is agreed before the wheels turn



REAL-TIME SUPERVISION

Every vehicle, every driver, on one command platform

Secure Identity.
Trusted Digital Future.

Tell us about your project and our team will come back with a proposal.

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