

# Thales Gemalto OEM Document Reader AT10K

## Identity & Biometric Solutions



## Product Use

The Gemalto OEM Document Reader AT10K is designed to inspect and image travel documents, including electronic travel documents and 1D and 2D barcodes used by the airline industry on boarding passes and cell phones. The reader's low profile and simple shape make it ideal for integration with self-service kiosks, counters and eGates at airports and other locations such as railway and cruise terminals.

The design of the Gemalto OEM AT10K is based on new research using infrequent travelers typical of the self-service environment. Along with detailed and exhaustive analysis of field experience and numerous deployed projects Thales has designed a new "landing lights" LED feedback arrangement which naturally encourages the correct placement and use of the reader, regardless if the user is left or right handed, maximising first time read rate for reduced queues and greater traveller satisfaction.

The virtually flat top with new user instruction decals and no hood makes the reading area clearly visible when presenting a paper or cell phone boarding pass or passport.

## Functions include:

- Reading of paper and cell phone boarding passes (BCBP)
- A new progress bar with Tick / Cross indicators makes reading a document intuitive, helping to direct the user during a read and visually show the result of the read
- Optional support for biometrically enabled travel documents and driving licenses containing contactless integrated circuit chips (eIDs, eDLs and ePassports)
- Accurate, true-color images, with anti-glare technology to reduce document laminate reflections and ambient light interference therefore improving image quality
- Optical document authentication and verification in border management, police, transportation and other commercial markets using additional software package

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### Features

- Reads and images multiple types of documents in Visible, Infra-red and Ultra-violet light using 24-bit color and true-color image matching technology
- High resolution 550 dpi option includes high speed USB 3.1 host port enabling fast image captures<sup>1</sup>
- Reads documents and barcodes placed at any rotation on the glass and presents images correct way up based on features in document
- Anti-glare technology eliminates image artifacts due to laminate or OVDs
- OCR data capture of the Machine Readable Zone (MRZ)
- Auto-triggering of document capture – presence of document is automatically detected
- Hoodless operation in many environments
- Internally sealed optical chamber to prevent dust ingress
- Low scratch, low-iron glass with oleophobic coating for low maintenance & easy cleaning
- Chemically Strengthened Glass without Oleophobic coating option for advanced durability
- Side and bottom mounting points for easy integration into kiosks and desks
- Powered from USB or external power supply
- Complete access to OCR data and images captured via Software Development Kit (SDK)
- Access to images as BMP, PNG or JPEG format
- Windows® 7, Windows® 8.1, Windows® 10, macOS and Linux® compatible<sup>1</sup>
- Hub – 2 ports for external peripherals
- Optional document spine hold down clip and optional hood

## Comprehensive Software Features

- Uses the same API interface as other Thales document readers using Gemalto Document Reader SDK
- Flexible software interface allows host application to select which illumination sources to use, image type, image compression, photo extraction, reflection or ambient light elimination, color enhancement, which data groups to read, etc.
- Simple high level API for quick program development or detailed low level API for fine control of all reader functions. SDK provides full configuration API
- Contactless IC reading for ePassports (LDS 1.7 & 1.8) including basic access control (BAC), passive/active authentication (PA/AA), Chip Authentication (CA), Terminal Authentication (TA), extended access control (EAC v1/v2), supplementary access control (SAC) and PACE-CAM are supported. The SDK provides writing capability using APDUs
- Contactless IC reading for eDL & iDL (electronic driving licenses) up to DG14 including basic access control (BAP v1), Password Authenticated Connection Establishment (PACE), passive/active authentication (PA/AA), Chip Authentication (CA), Terminal Authentication (TA), supplementary access control (SAC) and extended access control (EAC v1) are supported
- Full SDK including DLLs, code examples, utilities and demonstration programs. Can be used with Visual C++®, Java® and Microsoft® .NET Framework for Visual Basic® .NET and Visual C#®

## Reading Capability

The Gemalto OEM Document Reader AT10K reads the following documents:

- ICAO compliant documents in near infrared (IR) per ICAO 9303 specification
- One line Driving Licenses in near infrared (IR) per ISO18013 part 2 specification
- 1D barcodes (2 of 5 interleaved, 2 of 5 industrial, Code 128, Code 39, EAN-8 and EAN-13)
- 2D barcodes used on BCBP and other documents (PDF 417, QR Code®, DataMatrix™ and Aztec formats) from paper documents and many mobile devices

## Illumination

The reader illuminates documents in multiple wavelengths:

- Near IR B900: 880nm, +/-5%
- White visible: 430-700nm
- Ultraviolet (UVA): 365nm

<sup>1</sup> An external power supply is required to activate rear panel peripheral USB ports or when working under Linux and macOS

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### Resolution

- Standard 370 DPI image resolution, 3.1 Megapixel sensor
- High Resolution 550 DPI option, 10 Megapixel sensor
- RGB 24 bit color system

### ePassport (RFID) Option

Reads from and writes to contactless chips and eID according to:

- ISO 14443 (13.56MHz) Type-A and Type-B using a PC/SC interface
- ePassport support for ICAO 9303 LDS 1.7 & 1.8 and PKI using included SDK
- iDL & eDL reading and access control for driving licenses to ISO18013 parts 2 &3 and ISO/CEI TR 19446 using included SDK
- All standardized rates, up to 848 Kbps, read-out times depend on RFID tag, operating system and amount of data stored in the chip
- PC/SC interface provides support to other card types such as Mifare™.
- SDK certified to BSI TR-03105 Parts 5.1 and 5.2.

### Identity Document Verification

Additional software can authenticate an identity document which uses optical pattern matching to:

- Identify documents based on the type and country of origin
- Match security features captured from a document against a database of trusted security features
- Check for presence of UV dull paper
- Verify that areas are blank, devoid of patterns, text or printed matter
- Check photo in chip against photo on data page

### Firmware Upgrade

- Upgradeable firmware via USB 2.0 interface
- Non-volatile configuration and calibration accessed via USB interface

### Regulatory (in progress)

- FCC Part 15 Class A
- CB report
- US & CA NRTL (pending)
- CE - RED, LVD & EMC
- EU WEEE, REACH & RoHS Directive

### Environment

- Humidity: 20 to 95% (R.H. non-condensing)
- Temperature: -10° to 50° C operating; -20° to 50° C storage
- IP52 rating for dust ingress protection in the optical chamber (pending)

### Minimum PC Specification

Software must be installed on a customer-supplied PC, some aspects of read speed may be affected by PC specification. The following minimum configuration is recommended:

- 2 GHz Pentium® 4 CPU (Intel Core 2 Duo recommended)
- 1 GB DRAM
- USB 2.0
- 60 MB of Hard Drive space for software
- Windows® 7, Windows® 8.1 or Windows® 10 operating systems, 32 or 64 bit
- Builds for Ubuntu and CentOS LTS, 32 & 64 bit 2
- macOS (limited SDK functionality) <sup>2</sup>

### Standard Dimensions

- Length: 17.1 cm (6.7")
- Width: 14.5 cm (5.7")
- Height: 6.5 cm (2.6")
- Weight: 1.1 kg (2.4 lbs)

### Status Indicators

The readers provide user feedback via the following status indicators:

- Red Cross – Indicates a Read Error
- Green Tick - Indicates a Valid Read
- Yellow Progress Bar pulsing - Ready to place a new document
- Yellow Progress Bar incrementing – Performing a read, keep document still on the glass
- Yellow Progress Bar stopped – Document can be removed from glass

The readers perform a power-up self-test and indicate failure using status LEDs.

<sup>2</sup> An external power supply is required to activate rear panel peripheral USB ports or when working under Linux and macOS

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### Power

Powered from a single USB 2.0 port or via universal input external power supply :

- Power consumption: 5 volts DC, 500mA (when USB 2.0 powered)  
External PSU:
- Input voltage 100 - 240 VAC plus/minus 10%, Frequency 47 - 63 Hz
- Detachable IEC320 AC mains power cable

### Optional Add-On Module

- Contact smartcard to ISO 7816 Class A and AB (T0/T1)
- Fits to right side of reader
- Factory fit or customer upgrade (special factory order)

### Service & Maintenance

- One-year warranty
- Annual maintenance agreement available

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