

DOCUMENT READER

Gemalto KR9000 OEM



Product Use

The Gemalto KR9000 OEM Document Reader is used to inspect and image travel documents, including electronic travel documents and 1D and 2D barcodes used by the airline industry on boarding passes. The reader's low profile and simple shape make with self-service kiosks, counters and eGates at airports terminals.

The flat top, no hood design makes document and cell phone placement very easy for untrained users in a self-service environment.

Functions include:

- > Optional support for biometrically enabled travel documents containing contactless integrated circuit chips (eIDs and ePassports)
- > Optical document analysis in border management commercial markets
- > Accurate, true-colour images, with patent pending anti document laminate reflections and ambient light interference



FEATURES

- > Powered from USB or external power supply
- > Multiple document reading and imaging in 24-bit color matching
- > Patent pending anti-glare technology eliminates OVDs
- > 400 DPI high resolution imaging
- > Multiple wavelength illumination – Visible, IR, UV
- > Gemalto Confirm™ Security Laminate Imaging (optional)
- > OCR data capture
- > Complete access to OCR data and images captured via Software Development Kit (SDK)
- > Access to images as BMP, PNG or JPEG format
- > Hoodless operation in most environments
- > Auto-triggering of document capture – presence of document
- > Windows® XP, Windows Vista®, Windows® 7 and Linux® compatible¹
- > USB 2.0 high speed compatible
- > Integrated USB 2.0 Hub – 2 ports for external peripherals¹
- > No moving parts and internally sealed optical chamber to prevent dust ingress
- > Tempered glass to improve durability
- > Carbon (optional) glass coating to help reduce scanning surface scratching

¹ An external power supply is required to activate rear panel peripheral USB ports or when working under Linux

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Comprehensive Software Features

- > Flexible software interface allows host application to select which illumination sources to use, image type, image compression, photo extraction, reflection or ambient light elimination, colour 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) including Active and Passive authentication, Basic Access Control and Extended Access Control (PKI 1.11). The SDK provides writing capability using APDUs
- > 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 KR9000 OEM Document Reader reads the following:

- > ICAO compliant documents in near infrared (IR) per ICAO 9303 specification
- > ISO 14443 Type A and B contactless ICs at 13.56 MHz (optional)
- > 1D barcodes (2 of 5 interleaved, 2 of 5 industrial, Code 128, and Code 39)
- > 2D barcodes used on BCBP and other documents (PDF 417, QR Code®, DataMatrix™ and Aztec formats) from paper documents and some mobile devices

Illumination

The reader illuminates documents in multiple wavelengths and lighting orientations:

- > Near IR B900: 880nm, +/-5%
- > White visible: 430-700nm
- > Ultraviolet (UVA): 365nm
- > Gemalto Confirm™ Security Laminate (optional)
 - 24 Bit Colour
 - 8 Bit Monochrome IR

Resolution

- > Sensor: 3.1 Megapixels, CMOS, RGB 24 bit colour system
- > Standard 400 DPI image resolution

ePassport (RFID) Option

Contactless IC reading and writing capability according to:

- > ISO 14443 Type-A and Type-B using a PC/SC interface
- > ePassport support for ICAO 9303 LDS and PKI 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™.

Enhanced Document Authentication Option

Enhanced Document Authentication 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 – including UV, Gemalto Confirm™ laminate and visible patterns
- > Check for presence of UV dull paper
- > Verify that areas are blank, devoid of patterns, text or printed matter

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Firmware Upgrade

- > Upgradeable firmware via USB 2.0 interface
- > Non-volatile configuration and calibration accessed via USB 2.0 interface
- > Configuration can be saved to a file for backup or maintenance

Regulatory

- > FCC Part 15 Class A
- > UL, UL-C
- > CE, CB
- > WEEE & EU RoHS Directive 2011/65/EU

Environment

- > Humidity: 20 to 95% (R.H. non-condensing)
- > Temperature: -10° to 50° C operating; -20° to 50° C storage
- > IP50 rating for dust ingress protection in the optical chamber

Security

- > Slot for Kensington® Security Lock

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:

- > Intel® Celeron® 1.0 GHz
- > 512 MB DRAM
- > USB 2.0
- > 100 MB of Hard Drive space for software
- > Windows® XP SP3, Windows Vista® or Windows® 7 operating systems, 32 or 64 bit
- > Builds for Ubuntu 10.04 and CentOS 6, 32 bit only³

Standard Dimensions

- > Length: 19.0 cm (7.5")
- > Width: 16.2 cm (6.4")
- > Height: 12.3 cm (4.8")
- > Weight: 1.1 kg (2.4 lbs)

Status Indicators

The readers provide user feedback via the following status indicators:

- > Red - Read Error LED
- > Green - Valid Read LED
- > Yellow - Busy LED
- > Blue - Ready LED

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

² "RoHS Compliant" means that the Gemalto KR9000 Full Page Reader ("Product") placed on the EU market after January 2, 2013 meets the requirements applicable to electrical and electronic equipment ("EEE") in the recast RoHS Directive 2011/65/EU, including that the Product does not contain any of the following substances in excess of the maximum concentration values ("MCVs") in Directive 2011/65/EU, Annex II: (a) 0.1% (by weight) for lead, mercury, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers; or (b) 0.01% (by weight) for cadmium. The MCVs are by weight in homogeneous materials. This information related to material content represents Gemalto's knowledge and belief, which may be based in whole or in part on information provided by third party suppliers to Gemalto. Additional information on the Product's compliance with RoHS EEE requirements can be provided upon request.

³ An external power supply is required to activate rear panel peripheral USB ports or when working under Linux