

TECHNICAL DATA SHEET

Gemalto OEM Document Reader KR9000

High Resolution Camera option



Product Use

The Gemalto OEM Document Reader KR9000 with 10 megapixel (Mp) camera provides customer scalable images up to 720 dots per inch (DPI). The product inspects and images Machine Readable Travel Documents (MRTDs), 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 it ideal for integration with self-service kiosks, counters and eGates at airports and other locations such as railway 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:

- > Customer scalable images at the following image sizes 720,600,500,400,300DPI
- > Optional support for biometrically enabled travel documents containing contact and contactless integrated circuit chips (eIDs and ePassports)
- > Optical document analysis in border management, police, transportation and other commercial markets
- > Accurate, true-colour images, with patent pending anti-glare technology to reduce document laminate reflections and ambient light interference

KEY FEATURES & FUNCTIONALITY

- > Powered from external power supply
- > Multiple document reading and imaging in 24-bit colour using true-colour image matching
- > Anti-glare technology eliminates image artifacts due to laminate or OVDs
- > Configurable image resolution up to 720DPI
- > 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 is automatically detected
- > Windows® XP, Windows Vista®, Windows® 7, Windows® 8 and Linux® compatible
- > USB 2.0 high speed compatible
- > Integrated USB 2.0 Hub – 2 ports for external peripherals
- > No moving parts and internally sealed optical chamber to prevent dust ingress
- > Carbon glass coating to help reduce scanning surface scratching
- > Tempered glass (optional) to improve durability

1. Optional external power supply required to activate rear panel peripheral USB ports

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Comprehensive Software Features

- > Flexible software interface allows host application to select which illumination sources to use, image type, image compression, image resolution, photo extraction, reflection or ambient light elimination, colour enhancement, which date 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 OEM Document Reader KR9000 reads the following:

- > ICAO compliant documents in near infrared (IR) per ICAO 9303 specification Parts 1-4
- > ISO 14443 Type A and B contactless ICs at 13.56 MHz (optional)
- > ISO 7816 Class A and AB smart cards (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: 10 Megapixels, CMOS, RGB 24 bit colour system
- > Configurable image resolution, up to 720 DPI

Contact Smart Card Option

- > Supports ISO 7816 Class A and AB smart card
- > T=0, T=1 protocol support
- > Communication speed up to 344,105 bps (PPS, FI parameter)
- > Frequency up to 8 MHz (PPS, DI parameter)
- > 8 contacts – ISO location
- > Sliding contact

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

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

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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:

- > 2 GHz Pentium® 4 CPU (Intel Core 2 Duo recommended)
- > 1GB DRAM
- > USB 2.0
- > 50 MB of Hard Drive space for software
- > Windows® 8, Windows Vista® or Windows® 7 operating systems, 32 or 64 bit
- > Builds for Ubuntu 10.04 and CentOS 6, 32 bit only

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.

Power

Powered from universal input external power supply:
External 5Vdc PSU:

- > Input voltage 100 - 240 VAC plus/minus 10%
- > Frequency 47 - 63 Hz
- > Detachable IEC320 AC mains power cable
- > Locking 3 pin connector

Service & Maintenance

- > One-year warranty
- > 24-hour service request via toll-free number
- > Annual maintenance agreement available

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