THALES

Building a future we can all trust

Thales Gemalto Double-sided ID Card Reader CR5400

Identity & Biometric Solutions

Product Use

Designed for quick reading and ease of use the Thales Gemalto Double-sided ID Card Reader CR5400 inspects and images government issued identity documents ID1 sized (85 x 54mm, 3.3 x 2.1 inches) in a variety of market segments like Retail, Financial and Hospitality. Add Data Capture software to read all the fields from documents without a machine readable zone such as North American driving licenses. Perfect for use with Document Verification software to further validate the authenticity of your customer's documents.

Optional functions include:

- Support for biometrically enabled travel documents containing contactless integrated circuit chips (eIDs)

- ISO 7810 and ISO 7811 3-Track magnetic stripe reader

- Contact smart card to ISO 7816

- Data capture and form filling software

- Document verification software & library

- Gemalto Cogent Face Recognition Platform FRP Check SDK for facial matching

Reading Capability

- ID1 sized 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, UPC-A, 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

- AAMVA parser decodes North American driving License barcodes

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KEY STANDARD FEATURES & FUNCTIONALITY

- Simple drop in action starts the read, the ID can be in any portrait orientation, so no fussing

- Large LED surround clearly shows insertion drop slot

- Card automatically pops up at the end of the read

- Double-sided document imaging for ID1 size documents in 24-bit color

- Configurable image resolution up to 630 DPI

- Multiple wavelength illumination – visible, near infrared, and UV

- Anti-Glare technology eliminates image artifacts due to laminate or OVDs for more reliable reading and verification

- Automatic card detection and processing

- Windows® 7, Windows® 8.1, Windows® 10, macOS and Linux® compatible

- USB 2.0 high speed compatible interface

- eID (RFID), MSR and contact smartcard options available using additional cradle

- Rugged and durable design

- Industry standard ¼ x 20 threaded fittings to hold the ID1 Reader to a mounting device (tripod, kiosk, etc.; cradle option only)

eID (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

- eID support for ICAO 9303 LDS 1.7 & 1.8 and PKI using included SDK

- iDL & eDL reading and access control for driving licenses to ISO 18013 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™ (drivers for all supported OS)

- SDK certified to BSI TR-03105 Parts 5.1 and 5.2

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.

- Configuration via file or api, can be configured in field and saved

- 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 eID (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

- ICAO 9303 checksum, IR ink and UV dull validation

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- AAMVA parser for barcode decoding
- 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#®

Identity Document Verification Option

Additional software can authenticate an identity document using 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, IR and Visible patterns
- 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
- Jura Invisible Personal Information™ and similar hidden data can be decoded

Intelligent Cradle Option

For information on the networked cradle please see the Thales Gemalto Intelligent Double-Sided ID Card Reader CR5400i technical data sheet.

Thales Cogent FRP SDK Option

FRP Check SDK provides 1:1 face matching using up to 2 photos (generally from the datapage and DG2) and a live video feed to check that a person is the owner of an ID document. The SDK automatically captures a short video to locate and extract the face, simplifying the image capture process for the end-user. Liveness detection to prevent spoofing attacks is supported with specific cameras. For full details and installation requirements see separate data sheet.

Illumination

The reader illuminates documents in multiple wavelengths and lighting orientations:

- Near IR B900, 880nm, +/-5%
- White visible, 400-700nm
- Ultraviolet A (UVA): 360-370nm

Resolution

- Sensor: 10 Megapixels, CMOS, RGB 24 bit color system
- Configurable image resolution, up to 630 DPI

Status Indicators

- The Gemalto Double-sided ID Card Reader CR5400 has an illuminated card slot to enhance ease of use and provide user feedback for optical, RFID and MSR processes.
- The readers perform a power-up self-test and indicate failure using status LEDs.
- Programmable via software SDK

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

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Minimum PC Specification

Software must be installed on a customer-supplied PC, some aspects of the 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
- macOS (limited SDK functionality)

Power

- USB Powered Imager – USB Powered
- Imager and Cradle – 1.2A, 5V, Universal input wall-mount external power supply

Cradle Options

The cradle can have the following factory fit options:

- eID RFID
- MSR: ISO 7810 and ISO 7811 AAMVA 3-Track Mag
- Contact smart card according to ISO7816
- NOTE It is not possible to install both MSR and contact smart card options at the same time

Firmware Upgrade

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

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[1] Thales document readers are designed and certified for indoor use

Regulatory

- FCC Part 15 Class A
- UL, UL-C
- CB report
- CE - RED, LVD & EMC
- EU WEEE, REACH & RoHS Directives

Operating Environment[1]

- Humidity: 20 to 95% (R.H. non-condensing)
- Temperature: 0° to 40° C operating; -20° to 50° C storage

Standard Dimensions

	Imager Only	Imager and Cradle
Length:	15.5 cm / 6.1"	17.7cm / 7.0"
Width:	10.8 cm / 4.3"	10.8cm / 4.3"
Height:	10.2 cm / 4.0"	12.5cm / 4.9"
Weight:	< 1 Kg / 2.2 lbs	1.1Kg / 2.4lbs

Service & Maintenance

- Two-year warranty
- Annual maintenance agreement available
- Each reader is supplied with one cleaning card

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