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Thales Gemalto Intelligent Double-sided ID Card Reader CR5400i Thales Gemalto intelligent iSeries Cradle for CR5400

Identity & Biometric Solutions

Product Use

With built-in high-performance processing and networking the Thales Gemalto Intelligent Double-sided ID Card Reader CR5400i inspects and images credit card sized identity documents (85 x 54mm) in the cloud and virtual computing environments typically used in visitor management, retail, financial, hospitality and similar operations. With barcode reading and an optional RFID chip reader the Gemalto CR5400i is an all-in-one data capture device feeding advanced document and identity authentication SaaS systems.

The Gemalto CR5400i reader combines an intelligent iSeries cradle accessory with the Gemalto Double-Sided Reader CR5400 creating an intelligent iSeries networked ID card reader.

Available as:

- Reader and cradle combined - the CR5400i complete system
- iSeries cradle for CR5400 - converts a dumb reader to CR5400i

iSeries Overview

The Intelligent "i" series readers include an embedded Arm® processor running Linux® meaning that for networked mode all the document processing is carried out on the reader. Ready for the cloud the Gemalto CR5400i uses web style encrypted messaging to simplify app development, deployment and maintenance. For the customer this means:

- The Gemalto CR5400i can connect to any mobile device, phone or tablet
- The reader can be used in pool mode connecting to multiple devices
- A single computer can connect to multiple readers
- Flexible install options
- Faster development cycles and lower life time IT costs
- Connections to software as a Service (SaaS) back-ends
- No SDK to manage

iSeries Features

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KEY FEATURES

- Ethernet and WiFi network interfaces running the Web-API host interface

- Device, Operating System and language independent

- Connectivity to enterprise SaaS solutions

- Data security built in by design

- Double-sided document imaging, OCR and barcode reading for ID1 size documents including RFID chip reading & AAMVA decoder

- Reads ID cards and driver's licences in any orientation and presents images correct way up

- Simple drop in action with automatic card detection and processing

- Automatic card eject when reading is complete or when power is turned off

- Configurable image resolution up to 630 DPI

- Multiple wavelength illumination – visible, near infrared 880nm, and UV 365nm

- Anti-Glare technology eliminates image artifacts due to laminate or OVDs

- Browser accessible management console

- Full management and diagnostic interfaces

- On board dual core Arm® Cortex® A53 processor with Linux® OS runs image processing and RFID functions in reader

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

- Elegant design suitable for office/front desks

- Rugged and durable

Optional functions include:

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

- Contact smart card to ISO 7816

Reading Capability

For full technical specification please refer to the Thales Gemalto CR5400 technical data sheet.

- ID1 sized ICAO compliant documents per ICAO 9303 specification

- One line Driving Licenses 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 (PDF 417, QR Code®, DataMatrix™ and Aztec formats) from paper documents and many mobile devices

- AAMVA parser decodes North American driving License barcodes

- Optional 13.56MHz A/B chip reader for eID ICAO 9303 LDS 1.7 & 1.8 and iDL & eDL for driving licenses per ISO 18013 parts 2&3 and ISO/CEI TR 19446

Network Interface

The Web-API enables data and management of the reader over the network. It provides a similar feature set to the Gemalto Document Reader High Level API:

- The Web-API uses encrypted JSON messages to configure the read sequence and retrieve data and events from the reader. The onboard SDK provides image processing, OCR decode, barcode and eID chip protocols.

- Device discovery shows all the readers on the network and allows selection of a specific reader

- Typical programming languages include Swift™, Java, WebAssembly (for JavaScript), C# and C++

Device Management

- Device provisioning capability for on-site & off-site network setup including network parameters, credentials, local descriptions, etc

- Any iSeries reader can be provisioned straight out of the box using WiFi Direct to set up the reader

- Browser interface to manage the device, networks, certificates and keys

- Web-API interface to manage keys and certificates* and show/select available readers

- mDNS device discovery (Bonjour)

iSeries Features

Minimum host Specification in Networked mode

In Networked mode Thales provides a thin Messaging API layer which can run on any device, OS and language that supports JSON, WebSockets and ECDH key exchange, typically:

- Windows® 7, Windows® 8.1 or Windows® 10 operating systems, 32 or 64 bit
- Builds for Ubuntu and CentOS LTS, 32 & 64 bit
- iOS and macOS for iPhone and iPads, etc
- Android™ for mobile phones and tablets with network connectivity
- Java JVM

Browser Management Console

Just like any network device the iSeries readers have a management console which can be accessed using a browser which provides:

- Reader management including network parameter configuration
- Manual reader provisioning
- Test and diagnostics

Device Security

Security has been designed into the Gemalto Intelligent Double-sided ID Card Reader CR5400i so that you don't have to implement it which leads to faster and cheaper PII compliance:

- Software updates are protected by digital signatures and secure server preventing unauthorized applications from being loaded
- Data is protected in flight using AES-256 with Diffie-Hellman key exchange and server authentication (customer installed shared secrets)
- WiFi protected by WPA/WPA2 protocols
- Only authorized connections can be made to the reader via proprietary protocols
- Personal data is not stored in the reader

Software Upgrade

- Software updates can be pushed to the reader via the Web-API over the network or locally using the browser interface
- Reader can check in for updates with a customer hosted update server, either automatically or when prompted via Web-API*

- All updates are digitally signed by Thales ensuring integrity & security

Physical Interfaces

- 10/100/1000 Mbps Ethernet to IEEE® 802®.3
- WiFi IEEE 802.11b/g/n standards up to 150Mbps with WPA/ WPA2/WEP
- ISO 14443 (13.56MHz) Type-A and Type-B RFID eMRTD reader. All standardized rates, up to 848 Kbps, read-out times depend on RFID tag, operating system and amount of data stored in the chip
- Note: all iSeries Cradles for Gemalto CR5400 have ISO 14443 RFID support, however the Gemalto CR5400 imager has RFID as an option and may not support RFID
- Industry standard ¼ x 20 threaded fittings on cradle to hold the ID1 Reader to a mounting device (tripod, kiosk, etc.)

Power (with imager attached)

- Imager and Cradle – 1.8A max, 5V, Universal input wall-mount external power supply

* Future feature

iSeries Cradle for CR5400 Features

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Regulatory (pending)

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

Service & Maintenance

- One-year warranty
- Annual maintenance agreement available

Factory Install Options

The Network cradle can have the following factory fit options:

- Contact smart card according to ISO7816

Cradle Status Indicators

- 2 triple color LEDs indicate network connection and processor status
- The readers perform a power-up self-test and indicate power-up and failure states

Standard Dimensions

Imager and Cradle

- Length: 18.8 cm / 7.4 in
- Width: 10.8 cm / 4.3 in
- Height: 12.6 cm / 5.0 in
- Weight: 0.7 Kg / 25 oz

Operating Environment

- Humidity: 20 to 95% (R.H. non-condensing)
- Temperature: -10° to 50° C operating; -20° to 50° C storage

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