



Iris ID

Architectural & Engineering Specification – Summary

For iCAM7000 & 7100 Camera Units

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1. Part 1 – General

1.1 Summary

A. Section includes

- 1) Advanced Multifactor Biometric Iris Reader with the following authentication modes:
 - a. 1:N Identification (Iris only)
 - b. 1:1 Verification (Iris and Smart Card)
 - c. 1:1 Verification (Iris and PROX Card)
 - d. 1:1 Verification (Iris and PIN)

- 2) Advanced Multifactor Biometric Iris Reader with the following authentication modes:
 - a. 1:N Identification (Iris only)
 - b. 1:1 Verification (Iris and Smart Card)

1.2 System Description

A. Design Requirements: The following outline of the Advanced Multifactor Biometric Iris Reader is provided to define a framework for understanding the system design and operation.

- 1) Manufacturer: The included specifications are based upon the iris identification reader as manufactured by Iris ID Systems, Inc.; “iCAM7000 Series.”
- 2) Operation
 - a. Enrolled users present their live iris from a distance of 12-14 inches (30 – 36 cm) at the iCAM7000 Series reader or optionally, present an enrolled card or enter a PIN number and then their iris for authentication/verification. The iris biometric reader exhaustively searches through the entire database to identify or authenticate the presented iris with the previously captured, 512-byte IrisCode®. This Iris template can either be stored in the iris reader, on a smart card (iCLASS, MiFARE, DESFire), or in the Identification Control Unit (ICU7000).
 - b. Identification or authentication of an individual shall take less than two seconds and be capable of accomplishing the following:
 - i. Provide a Wiegand output to a third party Access Control Panel (ACP).
 - ii. Send a relay output to an electronic switch to allow the door to open.
 - iii. Record the time of each transaction and store the information locally on the device (up to 1,000,000).
 - c. Iris biometric readers shall provide positive identification or authentication of each user’s identity by positive analysis and matching of iris templates already stored in the database at time of enrollment.

- d. At time of enrollment the system shall allow the entering of access card numbers. These card numbers will be used for user template look up as well as user validation after user's card number has been sent through Wiegand to the ACP.
- 3) Performance Requirements: The Biometric Iris Reader shall conform to the following performance requirements.
- a. Maximum iris read time: 2 seconds.
 - b. Template size: 512 bytes per iris (~1K for both)
 - c. Transaction capacity: 100,000 transactions stored on device, unlimited on server
 - d. Support iCLASS, MiFARE, DESFire, and 13.56 Mhz
 - e. Support PIN mode via 8 bit bursts, 4 bit bursts, or galaxy format to the ACS.
 - f. Ability to read one of the card technologies mentioned above and send the card data after a successful match of a user's iris has been accomplished.
 - g. Ability to store a user's iris on the card if using an iCLASS card.
 - h. Available set up for a valid door unlock while simultaneously providing a duress code. * Only available when PIN is enabled. Configuration is set in ACP.
 - i. Ability to communicate with up to 132 other networked iCAM series devices over an RS422 connection.
 - j. Ability to communicate over a LAN or WAN.

1.3 Submittals

- A. Product Substitutions: For the intention of performing the work of this section, conform with product requirements stated herein.
 - 1) Where it is mentioned that a specific manufacturer's product is named and accompanied by the words "no substitutes," including make or model number or other designation, provide product exactly as specified.
 - a. Where no additional products or manufacturers are listed in a product category, requirements for "no substitutes" govern product selection.

1.4 Quality Assurance

- A. To provide our customers with an integrated services solution Iris ID recognizes the need to continually improve on our customer's ability to deliver reliable and operationally robust products that meet or exceed customer and regulatory requirements.

1.5 Warranty Policies

- A. Limited warranty on all hardware for the period of one (1) year from the date of purchase by the end user.
- B. Limited warranty on all software for the period of one (1) year from the date of installation by the end user.
- C. Warranty does not cover any damage or faulty operation due to improper installation, use, or abuse.
- D. Up to three (3) year extended warranties available for purchase.

1.6 Maintenance

A. Damaged Materials

- 1) If unit becomes damaged or non-operational it will need to be returned to Iris ID for repair or replacement. If unit is under warranty customer is not responsible for payment. If not under warranty customer is responsible for all associated costs.

B. Extra Materials

- 1) On a per project basis it may be necessary to purchase or store extra materials such as; iCAM's, power supplies, Ethernet cables. Extra materials should match products installed on site.

2. Part 2 – Products

2.1 Manufacturers

- A. Advanced Multifactor Biometric Iris Reader: “iCAM7000 Series” as manufactured by Iris ID Systems, Inc. No substitutions will be accepted.

2.2 System Description

A. Power

- 1) 12-24 VDC +/- 10% / Minimum 24 W (12VDC @ 2AMPS) (Measured at iCAM unit).
- 2) Uninterruptable Power Supply (strongly recommended).

B. Cables

1) Network

- a. Ethernet Wiring: CAT5e Ethernet Cabling (or better). Max cable length 328 ft. (100 M). Only use of IPv4.
- b. Ethernet Switch

2) Wiegand

- a. Cabling for communication card data from the iCAM7000 Series to ACP. Max cable length from iCAM is 500 ft. Max cable length into iCAM is 15ft.

C. Software

- 1) Required software for desired system type (IrisAccess EAC, iData Toolkit, DB API, and iData SDK)

2.3 Advanced Multifactor Biometric Access Control System

- A. General: Provide the iCAM7000 Series at indicated access points or T&A stations, including associated equipment and accessories required for complete installation.

B. Advanced Multifactor Biometric Iris Reader: “iCAM7000 Series”, incorporating the following features:

- 1) Voice and visual indication for capture distance
- 2) UL 294 Certification
- 3) Status LED: Multi Color – Red, Green, Blue for status and alarm indication
- 4) Iris capture range: 12”-14” (31cm-35cm)
- 5) Six (6) programmable function keys (iCAM7100)
- 6) 4.3” color touch screen LCD display (480 x 272 pixels) (iCAM7100)
- 7) Pin Pad: Pop-up on screen pin pad (iCAM7100)
- 8) High output flash for face capture
- 9) 5MP CMOS face camera
- 10) Request-to-Exit (REX) input
- 11) Two (2) Relay Outputs and four (4) General Purpose Inputs
- 12) 32 deg F ~ 113 deg F (0 deg C ~ 45 deg C) operating temperature
- 13) Up to 90% non-condensing
- 14) +35 deg / -25 deg Iris & face camera rotation angle
- 15) Less than or equal to 2 second identification time (1:many)
- 16) Power: 12~24 VDC, 2.0 Amps @ 12VDC / 24W

C. User Capacity: User licenses are sold separately with either the IrisAccess EAC software or iData SDK. EAC software capacity licenses are indicated below.

EAC Application Software Product	
Part Number	Product Details
EAC500	IrisAccess EAC S/W - 500 Users
EAC2500	IrisAccess EAC S/W - 2,500 Users
EAC5000	IrisAccess EAC S/W - 5,000 Users
EAC10K	IrisAccess EAC S/W - 10,000 Users
EAC30K	IrisAccess EAC S/W - 30,000 Users
EAC50K	IrisAccess EAC S/W - 50,000 Users
EAC100K	IrisAccess EAC S/W - 100,000 Users
EAC100K+	Please contact Iris ID (sales@irisid.com)

D. Options

	Iris Only	13.56Mhz iClass, MiFARE, & DESFire Cards	Read/Write Iris Data to Card*	LCD Display included	Popup PIN-pad	Option1 iCAM+ICU	Option2 iCAM+card	Option3 iCAM, no ICU
iCAM7000	Yes	No	No	No	No	Yes	No	Yes
iCAM7010-U1	Yes	Yes	Yes (Option 1 – write during IrisEnroll. Option 3 - Read only)	No	No	Yes	Yes (iCLASS Only)	Yes
iCAM7101	Yes	No	No	Yes	Yes	Yes	No	Yes
iCAM7111-U1	Yes	Yes	Yes (Option 1 – write during IrisEnroll. Option 3 - Read only)	Yes	Yes	Yes	Yes (iCLASS only)	Yes

3. Part 3 – Execution

3.1 Examination

- A. Review shipment to be sure that all products ordered were received.

3.2 Preparation

- A. Iris ID suggests testing and setting up all materials prior to installation.

3.3 Installation – General

- A. Review the iCAM7000 Series Hardware guide prior to installation and be sure to follow all manufacturer’s written instructions.

3.4 Installation – iCAM7000 Series

- A. Review the iCAM7000 Series Hardware guide for proper surface and recess mounting requirements. The recommended mounting height for the iCAM7000 series is 138cm (54.3 in.) from the floor to the bottom of the unit.
- B. For proper size dimensions please review the CAD drawing at the link below:
<http://irisid.com/1571>
- C. High amounts of ambient light must be avoided.
- D. Do not apply power to any remote units until the manufacturer’s grounding requirements are complete. Be sure to always terminate ground to only one end of a shielded cable.
- E. Complete the reader wiring prior to powering on the equipment.

- F. Maximum CAT5e cable length must not exceed IEEE standards of 328 feet (~100 meters). Each iCAM must have its own static IP address. It is also necessary to set the Subnet and Gateway. IP configuration is setup through the web configuration menu.
- G. System Programming – iCAM7000 Series program with Web Configuration Screen and EAC software 3rd party development tool.
- H. Single or Multiple Door Environments
 - 1) Install EAC software on host PC and set user permissions
 - 2) Uniquely Set all iCAM IP address connected on the network.
 - 3) Add remote units through the IrisManager application
 - 4) Add users to the database through the enrollment iCAM and IrisEnroll application

3.5 Cleaning and Protection

- A. Designed for indoor use only. This device is not weatherproof and must not be exposed to precipitation or extreme temperatures. 3rd party enclosures available if required for use outdoors. (See link below for outdoor use
http://irisid.custhelp.com/app/answers/detail/a_id/39/kw/outdoor%20installation)

3.6 Demonstration and Training

- A. iCAM7000 Series Training
 - 1) Provide partner training programs at our Cranbury, NJ facility, over the web and on-site. It is expected that after the training these partners and installers are sufficiently knowledgeable to allow them to train future users.
 - a. Set training schedule for duration of the year, meeting once per month.
 - b. Provide training literature, PowerPoint Presentation, handouts, and final test at each training session.
- B. Sales Training
 - 1) Provide sales training to cover system configuration, pricing, quotations, and frequently asked questions.