IRIS ID
Advanced Identity Authentication™

ID iCAM D2000 Multi Biometric System

User Manual

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iCAM D2000 Multi Biometric System

Compact, insightful, and unparalleled quality in biometric performance, Iris ID's iCAM D2000 represents a new class of fused iris and face identification systems. Flexible capture distance ranging from 50cm to 1.0m, iCAM D2000 provides an ergonomically intuitive user experience while delivering high quality iris and face images for enrollment and identification. With focus on usability and dimensions the iCAM D2000 is ideal for identity, travel and access solutions.

The iCAM D2000's unique feature set is the result of twenty plus years of research and development. Leveraging the experience from processing billion of identities and Iris ID's extensive product line, iCAM D2000 is both a natural and innovative next step in technology evolution. The ultimate biometric fused iris and face solution. The iCAM D2000 is truly a platform independent solution.

Iris ID provides a robust REST API to enable all functions of the iCAM D2000 . The development environment and functionality of the REST API is both robust and simple . Application developers will find the REST API's easy to implement.

Feabtures

 Multimodal (Iris & face) biometric Simultaneous capture

Automatically captures dual iris and face at the same distance.

 User Height accommodation

Automatic capture range from 1.2 M to 2.1 M

 Countermeasure for security

A proven set of anti-spoof measures that continues to set the standard for the industry is included.

 Installation flexibility

The device can be used with a mounting option that can be fixed to a desk.

 Capture range (50 ~ 100cm)

Auto Zoom, Pan and Focus . High quality optics

 Intuitive user guidance

10.1 inch high LCD display provides user feedback.

 Mask detection

The device can detect a user's mask.

 Standards Compliant Hardware and Software

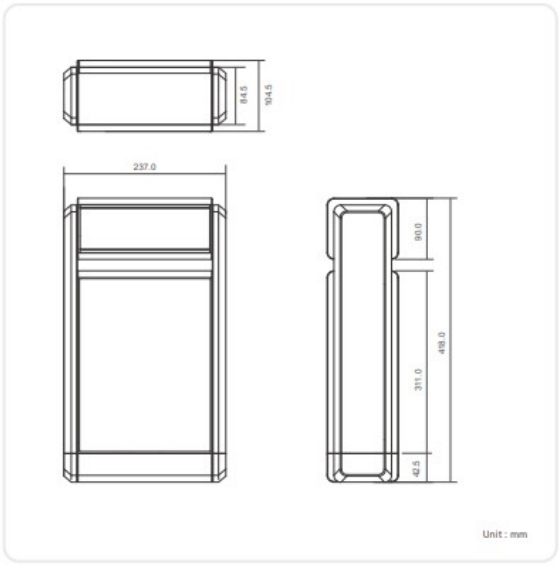
Standards : CE, FCC, Eye Safety, ISO and ICAO, RoHS

Specifications

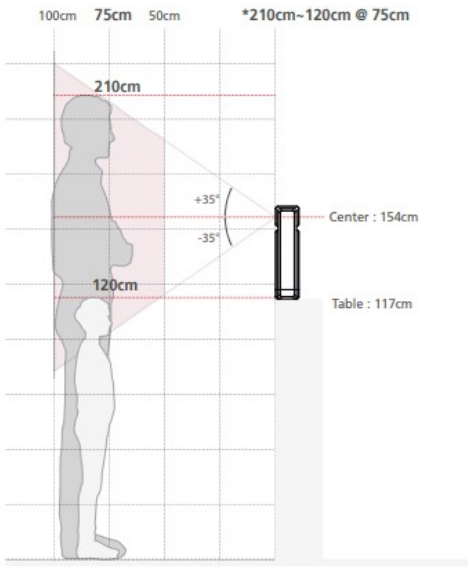
Basic	CPU Storage OS FPGA Power	Cortex-A53 2GB DDR3 (1866 Mbps, 1.35 V), 8GB eMMC Linux Kernel Version 4.4 Spartan6 + 64MB Flash Memory AC 100 – 240V, 90W
Display	Size Resolution Interface	10.1 Inch (Diagonal) LCD with capacitive touch screen 1280 x 800 MIPI DSI
Audio	Cocdec Speaker out	Various sample rate (8 – 48 KHz) YES
Camera	Color Camera Iris Camera Stereo Camera Capture Time	113MP, MIPI CSI-2, SoC, RGB888 2.3MP, BW, Global Shutter x 2 Minimum 200pixellcm in operating capture range 2.3MP, BW, Global Shutter x 2 Less than 1 seconds for dual iris and face capture
Illumination	IR LED	High Power LED 4EA x 2t
External I/F	Ethernet USB Memory	Ethernet 101100 Mbps USB2.0 Host/OTG Micro -SD Socket
Mechanics	Pan 1 Tilt Motor Iris Camera Lens	Precision high spped step motor x12 Zoom & Auto Focus
Capture Volume	Height (Tilt) Width (Pan) Distance	± 45 cm (120 cm -210 cm at 75 cm when table height is 117 cm) ± 50 cm at 100 cm, ± 25 cm at 50 cm 50 cm – 100 cm

Size	HxWx D Weigh t	41.8 cm x 23.7 cm x 10.45 cm (16.5″ x 9.3″ x 4.1″) 8 .8kg (19.4lbs)
Operating E nvironment	Operating Tem perature Storag e Temperature Humidity	32°F-113°F (0°C-45°C) -4°F-203°F (-20°C-95°C) 5-95% non-condensing

Mechanical Drawing



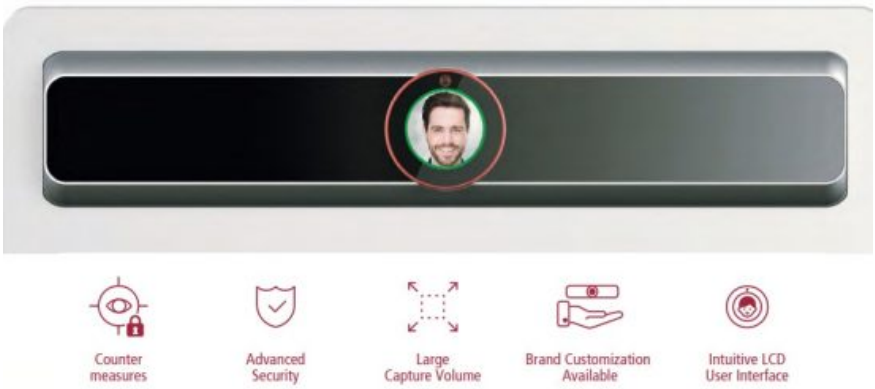
Capture Volume



Use Cases

IRIS ID AUTHORIZED RESELLER

iBar 600 Advanced Multi-Biometric OEM Module



The all new iBar 600 from Iris ID is the latest product release designed to help travelers skip the hassle when they need to identify and authenticate.

It was created in response to industry insiders communicating a need for a product that would deliver an efficient and effective user experience.

Ready for enrollment programs and security check in's including at the airport or for immigration, the iBar 600 is a complete and seamless OEM module that streamlines the verification process.

With an impressive capture volume, the multimodal iris & face collection iBar 600 is adept at providing crisp and accurate images at various angles – even capturing someone in a wheelchair. Upon kiosk approach, users will meet an intuitive and user-friendly 1.3" circular LCD interactive screen.

This screen placement instinctively attracts a user's eyes to begin the identification process.

With activation, cameras on the LCD zoom in and out and subtitles are featured on the bottom of kiosk screens as an additional instructional guide.

The iBar 600 is a smart, image capture standards compliant biometric system designed to work with legacy kiosk or gate implementation within aviation or transportation sectors.

Features

	Standards Compliant High Quality Video Streaming
	REST API Easy Integration

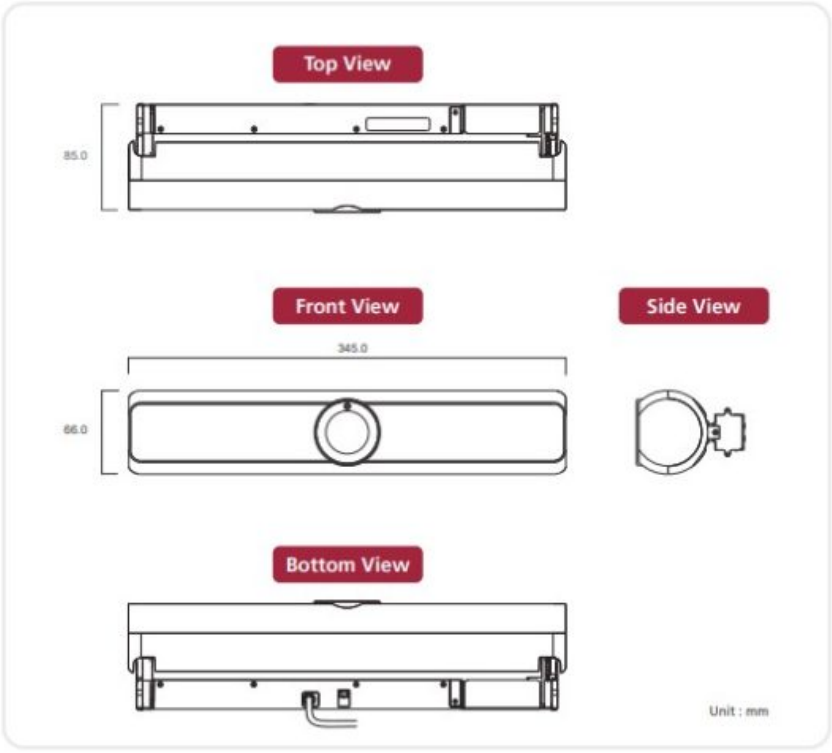
	Auto Zoom, Focus and Image Cropping
	Flexible Mounting Options
	Field Proven Technology
	Platform Independent Integration
	Iris & Face Capture up to One Meter
	OEM Package for Kiosk or Gate Installation
	Works with Masks and Glasses
	SDK for Image Quality , Template Generation & Matching

Specifications

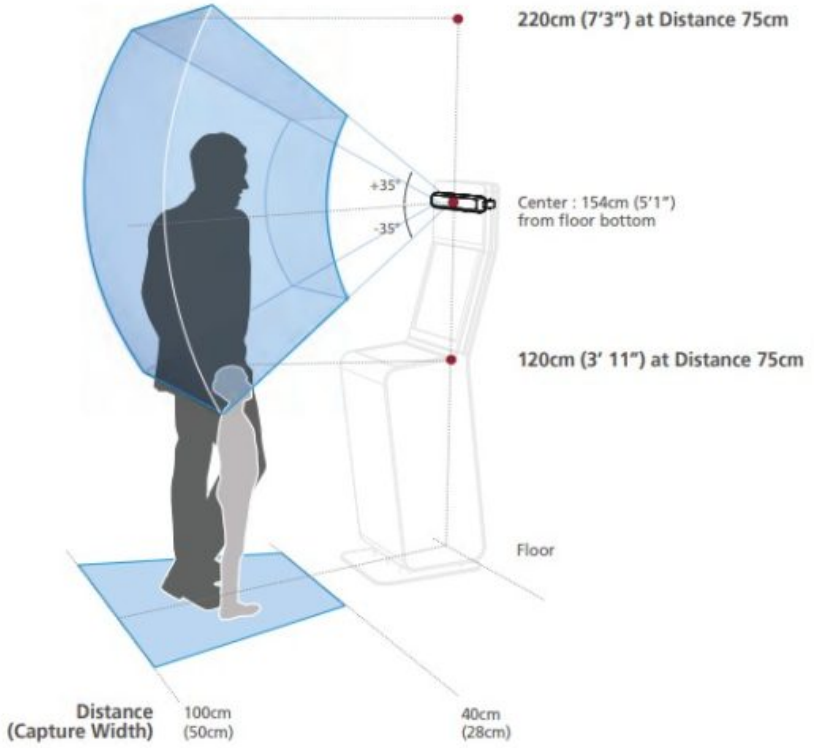
Basic	CPU Storage OS	Cortex-A53 2GB DDR3, 16GB eMMC Linux Kernel Version 4.4
Display	Size Resolution	1.3 inch, Circle Type TFT LCD 320(H) x 320(V)
Connectivity	USB Camera	Ethernet over USB
Camera	Iris Camera Face Camera	2.3MP, Dual Iris 13MP, HDR
Illumination	IR LED	ISO 29794-6 Standards Compliant – MR LED
Security	Secure Chip	PKI Based API Key Management
Mechanics	Pan / Tilt Motor Iris Camera Lens	Precision high speed x12 Zoom & Auto Focus

Power	Power Supply	DC24V 2.5A
Capture Range	Height (Tilt) Width (Pan) Distance	± 52cm at 75cm (±35°) ± 20 cm at 75cm (±5°) 40cm — 100cm
Size	WxHxD Weight	345mm x 66mm x 85mm (13.6″ x2.6″ x 3.3″) 1.1kg (2.4lbs)
Streaming	Face Image	H.264 Format, 30FPS © 1280×960 or VGA (Video Only)
Operating Environment	Operating Temperature Storage Temperature Humidity	32°F-113°F (0°C-45°C) -4°F–203°F (-20°C-95°C) 5-95% non-condensing

Mechanical Drawing



Capture Volume



Use Cases

IRIS ID AUTHORIZED RESELLER

Iris Recognition Reader

Iris ID's IrisAccess solutions continue to set the highest standard for performance and versatility for iris recognition. Whether you are looking for a single biometric identification solution, or a multi-factor verication solution that works with cards, card readers or keypad solutions, the IrisAccess platform will meet your needs.

Iris ID has been the leader and key developer and driver of the commercialization of iris recognition technology for the past 18 years.

The IrisAccess® System continues to lead the market as the world's most advanced and most widely deployed iris recognition platform.

The iCAM 7S series has features no other iris system offers. The iCAM 7S enables rapid iris acquisition with greater image quality for superior enrollment and recognition. The patented holographic targeting mirror is just one part of an intuitive and interactive interface that includes voice and visual feedback for increased speed. All models feature the robust Iris ID countermeasure package that experts agree sets the standard in the industry.

The new iCAM 7S series is a leap forward with larger system capacity and even easier to use. A larger targeting mirror and Auto-tilt assist allows touchless operation. The iCAM 7S models will operate in highly lighted areas – (up to 17,000 lux).

Iris ID's biometric solutions provide highly accurate, non-contact identiffication by the iris of the eye from 14 inches away while delivering security, convenience, privacy and productivity to millions of people around the world. The iCAM 7S versatility and fiexibility allows for easy integration with any Wiegand, OSDP/RS485 or IP network based access control, time and attendance, visitor management or point of sale applications.

Engineering and design teams have further enhanced the intuitive user interface of the iCAM series with visual and audible prompts that provide the easiest, quickest and most accurate iris enrollment and identiffication. A new, rapid, auto-tilt capability further

enhances speed and convenience with a simple touch or when combined with cards or PINs to adjust for height. A face image can also be obtained during enrollment to streamline badging and visitor management applications while a space for an optional surveillance camera has also been incorporated.

All iCAM models are supported by a comprehensive iData IrisAccess EAC software suite for access control. Software development toolkits allow partners to build customized identity management applications.

Every iris pattern is unique and stable for life and since there are more readily measurable characteristics in the iris. Iris recognition is regarded to be the most accurate, fastest, and scalable option for both small and large scale biometric deployments. Other biometric modalities such as fingerprint, hand, voice, vein and facial characteristics can often vary and change over time or with use conditions.

iCAM7S series

Advanced Mutifact or Biometric Iris Reaer

BENEFITS

- High Accuracy 1:N and 1:1 Capability
- High Speed – High Throughput
- Exceptional Flexibility and Ease of Integration
- Non-contact – Clean and Hygienic

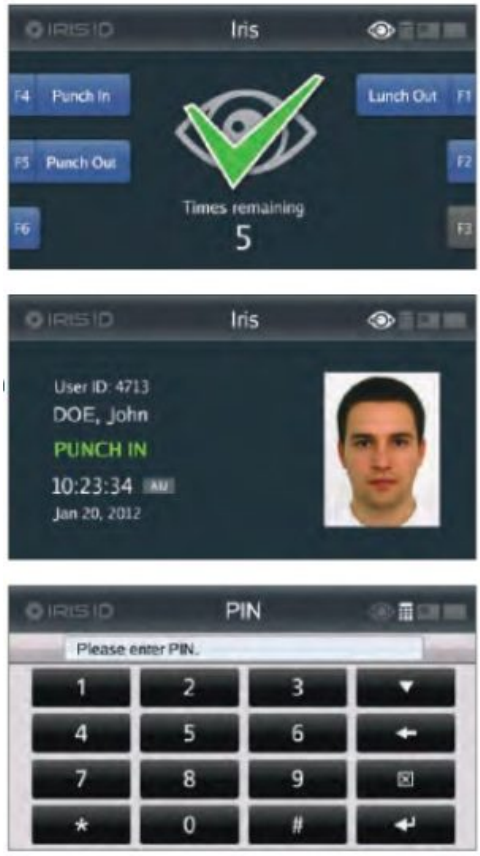
ARCHITECTURE

- Optional Identity control panels (ICU7000-2) and Iris Enroll and matching software (Iris Access EAC) may be required depending on the project requirements
- On board Time & Attendance Functions
- Anti-fraud: Fake iris detection
- Full set of contactless technologies

FEATURES

- Fast Fully Automatic Dual Iris Capture
- Easy Non-intrusive, Non-contact User Interface
- Integrated High Resolution Face Capture Camera

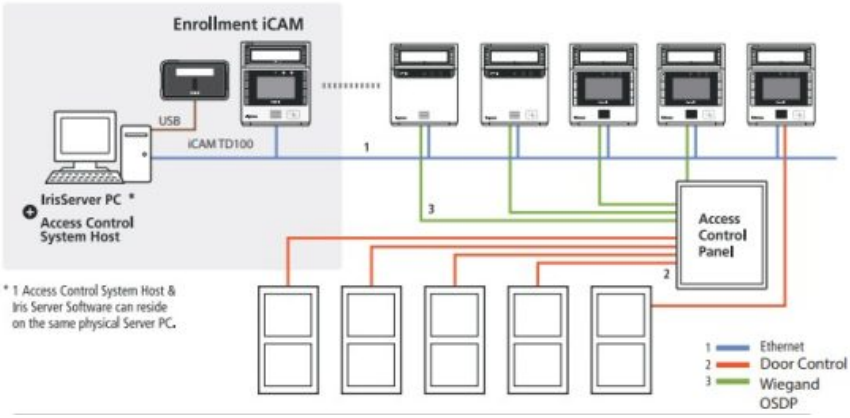
- Integrated Contactless Smart Card Reader (Option)
- Leverage Existing Infrastructure
- Capacity for Optional Third-party Surveillance Camera
- Easy Installation and Maintenance
- Backwards Compatible with IrisAccess 4000 and 7000 Systems
- Remote Management
- Stand-alone Door Access Capability
- Time and Attendance Ready
- Flush or Recess Mounting
- Capable of 1:N Matching of Millions Depending on Architecture



Basic System Configuration

The IrisAccess platform consists of IDATA EAC (Entry Access Control) enrollment and matching software as well as the award winning IrisAccess ICAM hardware. Individual hardware components can be easily configured. Many settings and options allow flexibility to meet application specific requirements and changing operational modes.

Sample IrisAccess Configuration



The ration above illustrates the iCAM 7S connected to a conventional Card Access System. Many operational variations are possible.

Iris ID Algorithm

Iris ID is recognized as the world leader for iris identification accuracy. The Iris ID algorithm is recognized and tested by NIST. The superior onboard quality assessment and countermeasures suite assures reliable and consistent performance.

Safety and Standards Compliant

Iris ID's success as a designer and manufacturer of high quality iris recognition for over 18 years is reflected by the adoption of Iris ID products and our global leadership. Continuous I review of market needs, human factors requirements and applying precise engineering enable Iris ID to deliver market leading solutions. Iris ID products have always met or exceeded all US and international eye safety requirements. The optics and subtle illumination produced by IrisAccess products have been thoroughly tested and found to fall well within UL and ANSI eye safety standards. The full line of Iris ID Iris Readers and Cameras are tested and comply with the most stringent safety standards: IEC 67421, UL294 ETL, and CE. Iris ID Cameras also conform to ISO 29794-6 Iris Interchange Standards.

System Security

Iris ID ICAM 7S Iris Readers include an array of security features which improve network communication and database protection. Digital certificates and standards based encryption are all a part of IrisAccess solutions.

Key Features

¡CAM 7S Iris Readers all reside on a TCP/IP network for device management. A wide array of input/output (I/O) connections are provided on all iCAM7 models which enable connection to virtually any third party system. ¡CAM 7S Provides both reader and controller capability in a single device. This design allows for a simple setup procedure and long term system stability eliminating any single point of failure affecting the entire

system operation. Operation can also be administered completely standalone via on-device Enrollment, thus eliminating the need to install any software on a PC in some configurations. iCAM 75 provides both Security and Convenience. Readers can be configured for virtually any combination using Iris Biometrics, Cards or Pins. This allows for the highest level of security or the greatest level of convenience depending on the application use case requirement.

Recognition Modes

1:N Identification, 1:1 verification with Iris + Card or PIN, 1:1 with Iris template encrypted on a Smart Card, Iris or Card or Pin

Additional Software Options Available:

Iris ID has a number of other options for greater system flexibility and database integrations.

iData EAC Toolkit Database Interface – COM API SDK

USB Camera Enrollment Application

Data Migration & Synchronization tools

IA Punch Service – Used in many Time & Attendance installations.

IA Reporting Application – Robust

Ask your Iris ID sales representative for a comprehensive overview of the available tools.

Iris ID is ready to provide Professional Services to address your particular business needs.

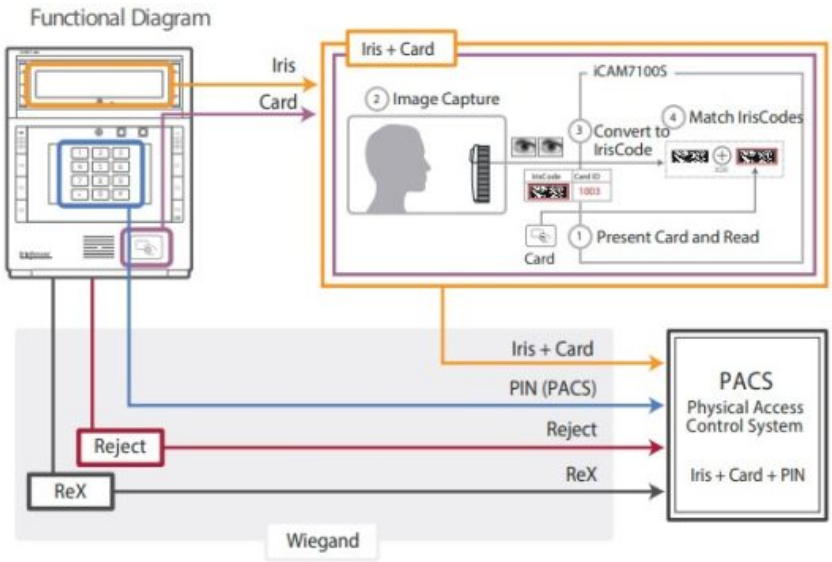
iData™™™ EAC Software Requirement &Features

- Simple and flexible administrative user interface for enrollment.
- System Requirement:
- Windows 2000/XP, Windows Vista, Windows 7, Windows 8.1, Windows 10, Windows 2008 & 2012 server Pentium Compatible 1.8 (or higher) GHz Processor
- 2 GB or higher Memory (OS dependent) – 10 GB Hard Disk space (or greater)
- CD/DVD Drive (For Software Installation) – Ethernet Port (100 Mbps recommended)
- Databases Supported – MS Access, MS SQL, MS SQL Express, Oracle See http://www.irisid.com

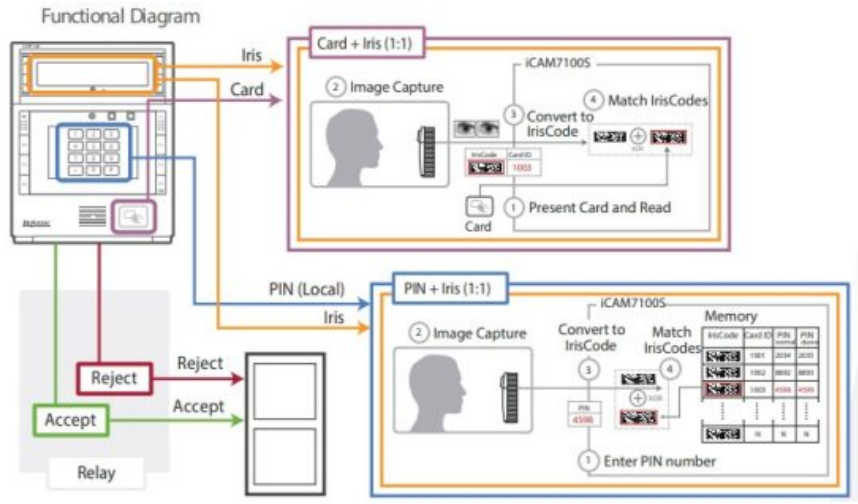
Multi-factor Authentication

Multi-factor authentication can be easily accomplished by using a combination of EAC software, iCAM 7S units with built in keypad and card readers (or third party readers) and leveraging a third party Physical Access Control System (PACS) that can support Card + PIN as an authentication mode. The result is authentication by Card + Iris + PIN. All iCAM models can be used with preinstalled external readers that output wiegand to o r 2 and 3 factor authentication options. Speci settings can be found in the iCAM7 series user guide under multi-factor authentication options.

3 Factor Authentication: iCAM 7S* with PACS System (PACS PIN)



2 Factor Authentication: iiCAM 7S* without PACS System (Local PIN)



* See complete list of model with options for LCD Keypad and Card reader functions.

iCAM 7S series Unit Model Matrix

Model Number	LCD Display / On -Screen Pin Pad	Card Reader	Color
iCAM7000S-B	No	No	Black ●

iCAM7000S-T	No	No	Titanium
iCAM7010S-H1B	No	Yes	Black
iCAM7010S-H1T	No	Yes	Titanium
iCAM7101S-B	Yes	No	Black
iCAM7101S-T	Yes	No	Titanium
iCAM7111S-H1B	Yes	Yes	Black
iCAM7111S-H1T	Yes	Yes	Titanium

Accessories	**Description**	**Color**
iCAM7-RMB	Recess Mount Kit	Black
iCAM7-RMT	Recess Mount Kit	Titanium
iCAM7-ST	Desktop Stand	Black
iCAM7-PWR	Power Supply	Black
Third Party Accessories	**Description**	
STI-7520	NEMA 4 Enclosure	
STI-7520HTR	NEMA 4 Enclosure with Hea ter	1

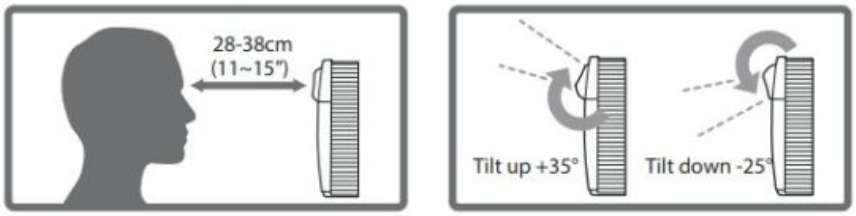
Use of IrisAccess

iCAM 7S series Specifications

Dimensions (W x H x D)	7.01” x 8.31” x 2.52” (178mm x 211mm x 64mm)
Weight	3.5lbs (1.6kg)
Power Input / Consumption	12~24 VDC, 2.0 Amps @ 12 VDC / 24W
Status LED	Multi Color – Red, Green, Blue for status and alarm indi cation
Iris Operating Range Indicator	Dual Color – Orange (out of range), Green (in range)
Voice Indication	English and Korean standard, other languages availabl e
Iris Capture Range	11“~15” (28cm~38cm)
User Input	Six user definable Function Keys (iCAM7101S, iCAM71 11S)
Touch Screen LCD Display	4.3“ / 480 x 272 pixels (iCAM7101S, iCAM7111S)
Pin Pad	Pop-up on screen pin pad (iCAM7101S, iCAM7111S)
Flash	High output LED fiash for face capture
Face Image Camera	Face camera CMOS – 5MP
Reader Database Capacity	100,000 Users
Transaction Log Capacity	Up to 1,000,000 transactions stored on device, unlimite d on server
Relays x 2(door, other)	Control for all electric locking mechanisms and auxiliary relay for user defined operation
Operating Temperature	32°F~113°F (0°C~45°C)

Storage Temperature	-4°F~203°F (-20°C~95°C)
Humidity	Up to 90% non-condensing
Iris & Face Camera Rotation Angle	+35°/-25°
Communications	Ethernet (LAN, WAN), RS232, RS485, RS422
Inputs / Outputs	Embedded Card Reader (Optional), Wiegand In, Wiegand Out, OSDP/RS485, Dry Contact Relay x 2, Programmable GPIO x 4
Equipment Supplied with iCAM 7S series	Instruction Manual – Hardware Guide
IrisAccess EAC Server for Enterprise, iData SDK	Refer to IrisAccess Enterprise Access Control Software specifications
Certifications	CE, FCC, KC, Eye Safety, UL294, ISO Standard, IEC, KISA

User Interface



- iCAM activates when user approaches or when card is presented.
- Picture capture range is 11~15 inches (28~38cm) away.
- Self or auto/set tilt adjustment.
- Positioning dot over the bridge of nose, easily helps alignment.

- Orange 🟠 turns to green 🟢 when user is at correct distance.
- Visual indication is complemented with friendly audio prompts.
- Right and left iris images are acquired.
- A face picture can also be captured.

🟢 Green dot = In range

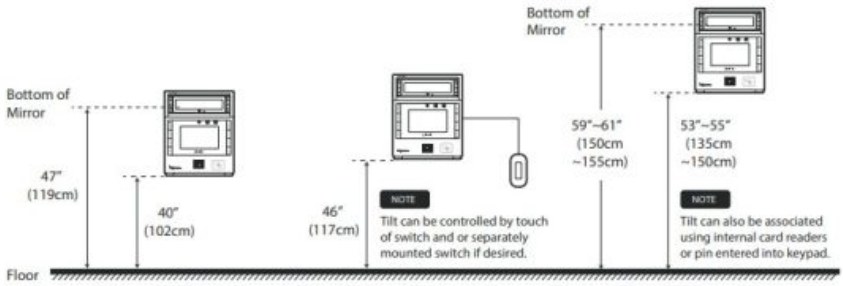
🟠 Orange dot = Out of range

Installation and Dimension

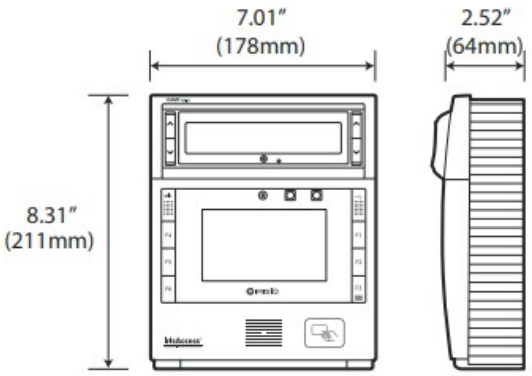
Iris Camera Mounting Height should take into consideration the environment and specific application. Taller people can always bend slightly at the waist or look down at a fully tilted up camera.

Shorter people may require some consideration and thought by the installers. The iris camera can be mounted lower. An external tilt switch can also be used to aid in tilting of camera target mirror.

Possible mounting heights for difierent applications.



Suggested Mounting Heights only. Height should take into consideration the users and the read range of 11-15 inches away from the front of the mirror. Taller people have more fiexibility to look or bend down slightly. The cameras should be at a comfortable height where shorter people can comfortably use the technology.



Suggested mounting height and dimensions.

Surface Mount: Back plate included.

Recess Mount: Recess/Trim kit sold separately.

Eye Safety

Iris ID's success as a designer and manufacturer of high quality iris recognition solutions for over 18 years is refiected by the global leadership and adoption of Iris ID products. Continuous review of market needs, human factors requirements and precise engineering enable Iris ID to deliver market leading solutions. Iris ID products have always met or exceeded all US and international eye safety requirements. The optics and subtle illumination produced by IrisAccess products have been thoroughly tested and found to fall well within UL and ANSI eye safety standards.

iData™ EAC Software Features

Enrollment: Simple and fiexible administrative user interface for enrollment.

Setup: Improved software setup and configuration tools for ease of installation.

Reporting: Individuals are identified as their biometrics are presented. Transactions are stored in he system log and can be downloaded by a system administrator. Logs can also be integrated into an HR time keeping system. IrisMonitor™ provides real time access reporting for multiple iCAM7 series devices.

iCAM R100 Iris Recognition Camera Module

DUAL IRIS	**FACE CAMERA**	**FLASH LED**
	USB	**1/4 -20 Mount**

- High Speed Iris Capture & Matching in a compact package
- On or Off Device Iris Template Matching
- Up to 100K User record local 1:N matching in 1 second

- National ID Quality Iris Image – Standards Compliant
- Intuitive User Interface with Virtual LED Indication
- 5 MP face camera White LED fiash
- Comfortable Capture Distance 28~38 cm (11~15 Inches)
- Flexible Mounting Options
- USB3.0 Powered

The iCAMR100 Series is a compact iris recognition device used commonly in OEM applications. This device can be added to a kiosk or built into a complete solution. The camera has the same optical characteristics as the iCAM 7S along with the capability to store up to 100k users on the device's internal memory and the ability to perform 1:N and 1:1 matching.

Previous handheld iris recognition systems required significant cooperation and for a subject to remain completely motionless in order to capture high quality iris images. Iris ID has developed a series of algorithms which provide the capability to capture iris images in any environment.

High Speed – Dual Iris capture

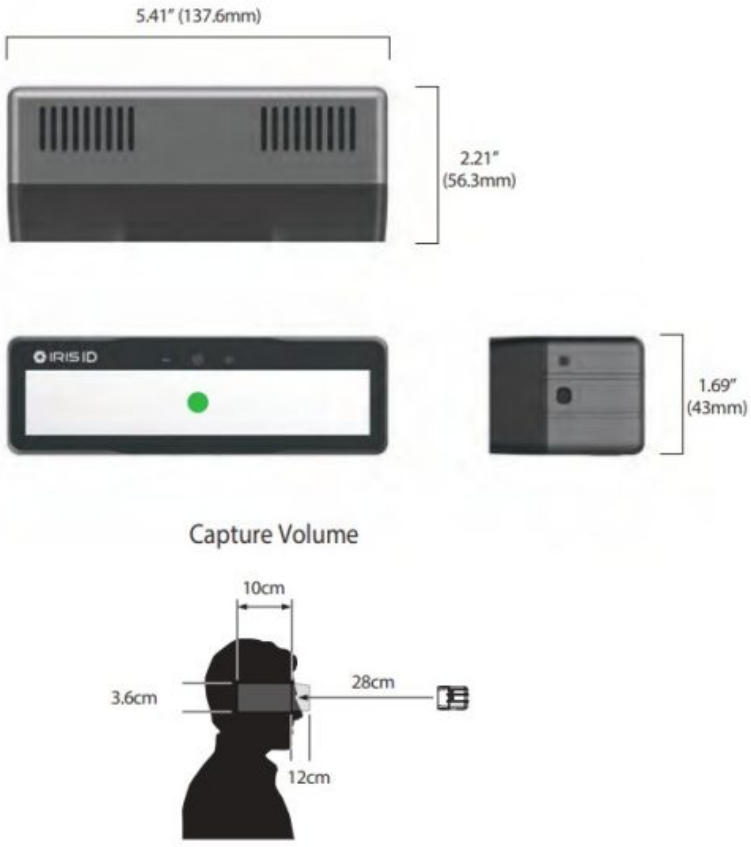
The iCAM R100 performs high-speed dual iris capture and outputs high quality ISO standards compliant images. Both eyes can be simultaneously captured. The R100 provides an unparalleled intuitive user interface, which makes the process easier for the user and operator. The R100 is also equipped with an orientation sensor and left and right iris capture management controls which can be selected prior to or during the process.

Technical Specifications

Applications

- Kiosks
- Portable Enrollment Systems
- Time & Attendance Clocks
- Iris Identity Dependent Application
  - Public Safety
  - Entitlement Programs
  - National ID

Mechanical Drawing



iDATA iCAM R100 SDK

Iris ID provides an API SDK to enable all functions of the iCAM R100. The development environment and functionality of the SDK for the iCAM R100 module closely mimics those of the widely deployed iData SDK for the IrisAccess iCAM series cameras. Application developers familiar with the other Iris ID development tools will find integration to be very simple.

SDK Versions

Three versions of the SDK are available:

- Image Capture only
- Image Capture & Quality Metrics
- Image Capture, Quality Metrics and Matching

Sample Application Source Code

The sample application source code is delivered as a part of the SDK. Sample SDK code is provided in C++ and C#.

Demonstration Application

A runtime only application is available for customer evaluation which provides the functionality to perform iris image capture and iris template matching.
iCAM R100 (Iris Camera Module)

Dimensions (W x H x D)	55.41” x 2.21“ x 1.69” (137.6mm x 56.3mm x 43mm)
Weight	0.52lbs (240g)
Power Input	USB Powered (3.0 Port Only) Power Adapter Powered, 5VDC Operational Power: 4.3 watts / Standby Power: 2.3 watts
Iris Camera	1.2MP Auto & Manual Dual Iris Capture with B&W Image Sensor
Iris Capture Range	11”~ 15” (28cm ~ 38cm)
Face Image Camera	Face Camera CMOS – 5MP
Flash	High Output Flash for Face Capture
Interface	USB 2.0 (or higher)
Orientation Sensor	Built-in Orientation Sensor
Indication	External: Blue LED – Power Indication, Green / Red / Amber LED – Status Internal: Green LED for Right Eye Positioning Sound (Optional by Application)
Speaker	1.2W
SDK	Windows COM, Android, Embedded LINUX
Operating Temperature	32°F ~ 122°F (0°C ~ 50°C)
Storage Temperature	-4°F ~ 203°F (-20°C ~ 95°C)
Humidity	0 ~ 95% Non-condensing

Certifications	CE, FCC, KC, Eye Safety, ISO Standard, KISA

NOTE

Items Required for Use of This Product

Required Equipment (not provided by Iris ID)

- Windows based PC (Windows XP (32-bit) / Windows 7 (32/64-bit) / Windows 8 (32/64-bit) / Windows 10 (32/64-bit) Minimum Computer requirements
- Microsoft Windows XP (32-bit), Windows 7 (32-bit), or Windows 7 (64-bit) OS
- 512MB RAM (or higher)
- x86 Processor, 2.0 GHz (or higher)
- 2GB available HDD space or above
- Microsoft .NET Framework ver. 3.5
- Mouse, SVGA Monitor, Keyboard
- Dedicated USB 2.0 port (or higher)
- USB 2.0 port may be used but the iCAM R100 will require external power adapter. USB 3.0 or higher is recommended. Optional Support for:
- Android devices
- Embedded LINUX devices

  An available and dedicated USB 2.0 compliant port is needed to properly use the iCAM R100.

IRIS ID AUTHORIZED RESELLER

Multimodal Biometric Device

iCAM M300 Multimodal Biometric PDA

- Multimodal – Iris & Face & Fingerprint (with M3-AM)
- High Speed Dual Iris Capture (Standards Compliant)
- 500 dpi Single Finger Sensor
- MRZ & Magnetic Swipe Card Reader
- IP54 Compliant – Dust & Water Resistant
- Connectivity – 4G LTE / HSPA+ / GSM / GPRS – Wireless WAN & LAN, GPS
- Various Ready-to-use Accessories (Cradle,
- Direct Auto Charger Kit & rechargeable batteries)

iCAM M300

CPU	1.8GHz Octa-core processor
OS	Android 6.0 Marshmallow
Demensions	139mm(H) x 73mm(W) x 21mm(D) 5.4inch(H) x 2.8inch(W) x 0.8inch(D)
Weight	250g (8.8oz) with 1860mAh Battery 300g (10.6oz) with 4 000mAh Battery
Display	4.3Inch / WVGA(480×800)

Touch Panel	Capacitive touch (Optional : Resistive touch)
Operating Temperature	-20 C ~ 60 C (-4 F ~ 140 F)
Storage Temperature	30 C ~ 70 C (-22 F ~ 158 F)
Humidity	Non-condensing, 93%
Camera	13Mega Pixel Camera with Autofocus and LED Flash
Wireless WAN	4G : Band1(2100), Band3(1800), Band7(2600), Band20(800)
(World wide)	3G : Band1(2100) 2G : GSM 900, 1800
Wireless WAN	4G : Band2(1900), Band4(1700), Band5(850), Band17(700)
(US)	3G : Band2(1900), Band4(1700), Band5(850) 2G : GSM 850, 1900
Wireless LAN	IEEE 802.11 a/b/g/n/ac
Bluetooth	Bluetooth 4.2 BLE
GPS	Embedded A-GPS

Iris Camera

Camera	5MP B&W CMOS sensor
Operating Range	350±40mm(12.2”~15.3”)
Resolution	Above 160 pixel/cm
Iris Capture Volume	130mm x 46mm x 80mm
Illumination	IR LED

Image	2592 x 920 x 30 Frame
Dimension	56mm(W) x 21mm(H) x 10mm(D)

Fingerprint Module

Sensor Type	Touch Area Sensor
Sensing Area	8mm x 8mm x 0.7mm (WxHxD)
Sensing Array	192 x 192 Pixel (508dpi)
Pixel Resolution	256 Gray scale values
1 Finger 1 Template Data	256 Byte

OCR (MRZ Reader)

Standard OCR Fonts	OCR-B and E13B
Machine Readable Passports (MRP)	2 lines of 44 characters
Machine Readable Visas (MRV)	2 lines of 44 characters, 2 lines of 36 characters
Travel Documents	2 lines of 36 characters, 3 lines of 30 characters
Field of View Object Height	19.6 mm nominal
Depth of Field	1.5 mm maximum from imager window

Magnetic Swipe

Magnetic Swipe Reader Reads magnetic cards comlying with ISO7811/2-5

Accessories

Desktop Cradle

Snap on

iCAM T10 USB IRIS CAMERA

High Speed High Quality

DUAL IRIS	**USB 2.0**	**IP54**
	TETHERED	

- High Speed Dual Iris Capture
- USB Powered
- Orientation Sensor
- Compact and Lightweight

- Standard Tripod Mount
- Standards Compliant Hardware and Software
- Integrated Cable Management
- Detachable Visor for easy care/cleaning
- IP54 Compliant – Dust and Water Resistant

Iris ID (formerly LG Iris) has been producing commercial iris recognition systems since 1997. In thousands of locations, IrisAccess® authenticates the iris identity of more persons than all other iris platforms combined. Iris ID's rich experience in iris recognition is exemplified in the iCAM T10.

Previous handheld iris recognition systems required significant cooperation and for a subject to remain completely motionless in order to capture high quality iris images. Iris ID has developed a series of algorithms which provide the capability to capture iris images in any environment.

High Speed – Dual Iris capture

The iCAM T10 performs high-speed dual iris capture and outputs high quality ISO standards compliant images.

Both eyes can be simultaneously imaged utilizing the USB2.0 interface. The T10 provides an unparalleled intuitive user interface, which makes the process easier for the subject and operator. The T10 is also equipped with an orientation sensor and left and right

iris capture management controls which can be selected prior to or during the process.

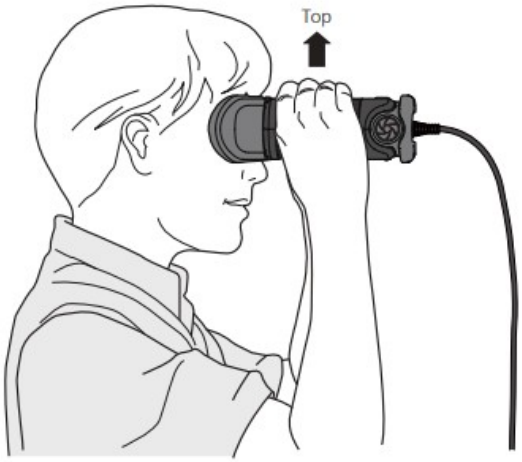
IP54 Reliability and Certifications

The iCAM T10 conforms to IP54 standards for water, humidity, and dust resistance. The elastomeric material and design of the T10 further enhances its durability allowing for easy cleaning. The T10 meets or exceeds CE, FCC, and Eye Safety industry certification standards.

Fully automatic dual iris image capture and quality analysis routines are available as a part of the Iris ID SDK API set for the field application of the iCAM T10. An illustration of the iris capture process is shown below.

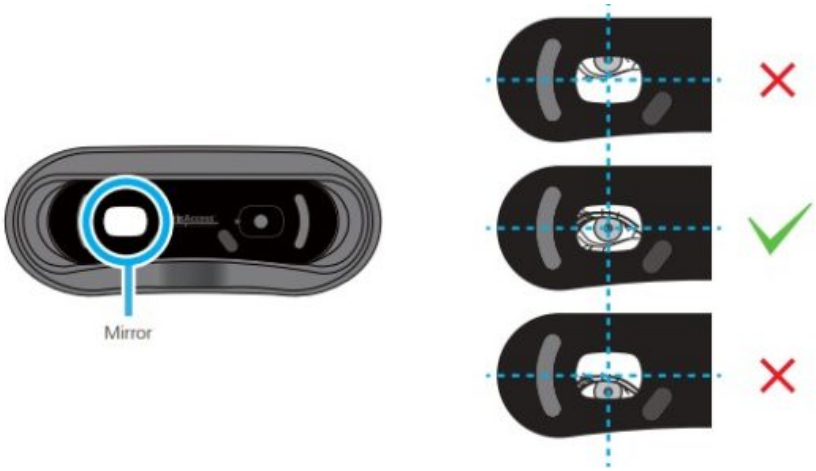
How to Operate

With the top of the unit facing up, gently hold the hand grips located at either side of the visor. Place the T10 in front of your eyes so that it is centered between the bridge of the nose and forehead as shown below.



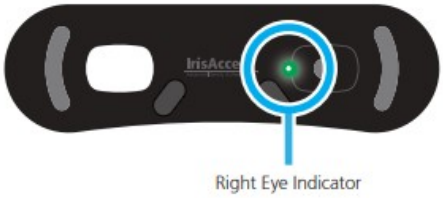
NOTE This product contains a built-in orientation sensor to assure proper usage. If the T10 is in an improper position for usage, (upside down) the unit will beep repeatedly until the correct orientation is restored.

With the visor in position, look straight into the unit so that the left eye is centered in the mirror. (During the enrollment process the eyes should be open as wide as possible until the capture process is completed)



NOTE

If looking into the mirror with the left eye is not possible or uncomfortable; the user may positionthe right eye straight at the right eye indicator LED. The unit operator may assist in directing you during this process.



iDATA iCAM T10 SDK

Iris ID provides an API SDK to enable all functions of the iCAM T10. The development environment and functionality of the SDK for the iCAM T10 module closely mimics those of the widely deployed iData SDK for the IrisAccess iCAM series cameras. Application developers familiar with the other Iris ID development tools will find integration to be very simple.

SDK Versions

Three versions of the SDK are available:

- Image Capture only
- Image Capture & Quality Metrics
- Image Capture, Quality Metrics and Matching

Sample Application Source Code

The sample application source code is delivered as a part of the SDK. Sample SDK code is provided in C++ and C#.

Demonstration Application

A runtime only application is available for customer evaluation which provides the functionality to perform iris image capture and iris template matching.

iCAM T10 (USB Iris Camera)

Dimensions (W x H x D)	7.55” x 6.56” x 2.61” (191.7mm x 166.5mm x 66.2mm)
Weight	0.96lbs (438g / Camera Unit: 0.58lbs, Sun Visor: 0.38lbs)
Power Input	USB Bus Powered
Iris Camera	1.2MP Auto & Manual Dual Iris Capture with B&W Image Sensor

Iris Capture Range	4.92” (125mm)
Interface	High Speed USB 2.0
Indication	External Green LED for Power Indication & Internal Green LED for Right Eye Positioning. Beep Sound (Optional by Application)
Usability	Detachable Visor for cleaning the front window IP54 for Dust and Water Resistant
Operating Temperature	32°F ~ 122°F (0°C ~ 50°C)
Storage Temperature	-4°F ~ 203°F (-20°C ~ 95°C)
Humidity	0 ~ 95% Non-condensing
Certifications	CE, FCC, Eye Safety

Items Required for Use of This Product

Required Equipment (not provided by Iris ID)

- Windows based PC (Windows XP (32-bit) / Windows 7 (32-bit) / Windows 7 (64-bit))

Minimum Computer requirements

- Microsoft Windows XP (32-bit), Windows 7 (32-bit), or Windows 7 (64-bit) OS
- 512MB RAM (or higher)
- x86 Processor, 2.0 GHz (or higher)
- 2GB available HDD space or above
- Microsoft .NET Framework ver. 3.5
- Mouse, SVGA Monitor, Keyboard
- Dedicated USB 2.0 port

NOTE

An available and dedicated USB 2.0 compliant port is needed to properly use the iCAM T10.

IP54

High Speed USB 2.0 Certified

iCAM TD100A Iris & Face Recognition Camera

DUAL IRIS & 2D Face	**FACE CAMERA**	**3.5 inch LCD**
	IP54	**USB 3.0**

- High Speed Automatic Dual Iris Capture
- High Quality Color 2D Face Capture
- Single Motion Automatic Iris and Face Capture
- Intuitive Operator LCD Guidance System
- Standards Compliant Hardware and Software

iCAM TD100A Model Matrix	**iCAM TD100A** able Cable	External Power & Remov
	iCAM TD100A-U ovable Cable	USB 3.0 Power & Rem
	iCAM TD100A-C ve Cable	USB 3.0 Power & Capti

The iCAM TD100A can be ordered in one of three configurations as noted above. A fully compliant USB 3.0 PC can use the iCAM TD100A-U or iCAM TD100A-C. Older PC's with a USB 2.0 port requires the use of the external power supply with Siamese cable.

Iris ID has been producing commercial iris recognition systems since 1997. In thousands of locations, IrisAccess® authenticates the iris identity of more persons than all other iris platforms combined. Iris ID's rich experience in iris recognition is exemplified in the iCAM TD100A.

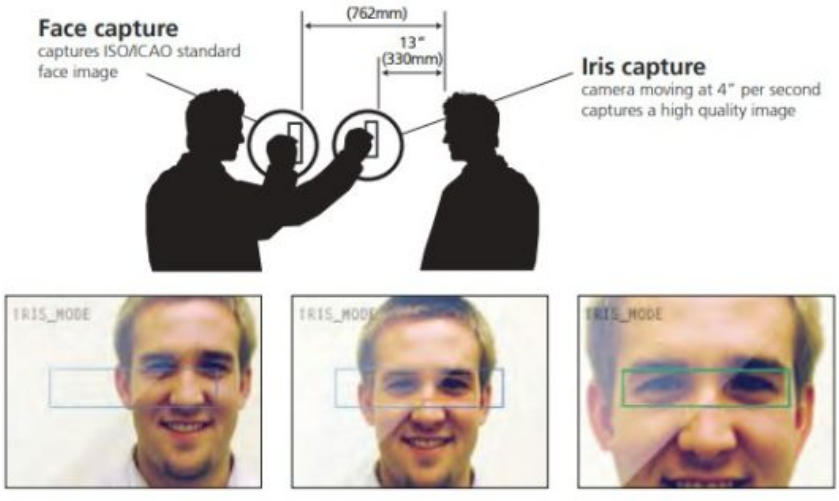
Previous handheld iris recognition systems required significant cooperation and for a subject to remain completely motionless in order to capture high quality iris images. Iris ID has developed a series of algorithms which provide the capability to capture iris images while either the person or the device is in motion. The "iris in motion" capability helps to realize new horizons in market applications for the technology.

High Speed – Dual Iris capture

The iCAM TD100A includes an optical system specifically designed and optimized to operate in perfect unison with the integrated high speed multi-sensor iris imager array. The iCAM TD100A automatically processes and outputs high quality ISO standards compliant iris images of a subject in less than one second as the device or the subject approaches the optimum capture distance.

Iris Image Capture Process

Fully automatic dual iris image capture and quality analysis routines are available as a part of the Iris ID SDK API set for the field application of the iCAM TD100A. An illustration of the iris capture GUI screen is shown below. Iris ID's iData SDK runtime license for iris enrollment and quality assessment is available for use with the iData TD100A module subsystem. Iris and face capture are performed by the operator extending their arm from the face capture distance to the iris capture distance as illustrated below.



Face Image Capture

The face capture API function is included in the SDK.

- The integrated framing function provides feedback for the capture of a properly formatted ISO/ICAO face image.
- Manual face capture with auto focus is also possible through the camera calls in the iData SDK sample application.
- An application developer can also use host based face finding to trigger the face capture automatically from the host processor.
- Face capture can be initiated through API or via the shutter button on the iCAM TD100A.
- Sample illustrations of face capture modes are shown below.

iDATA iCAM TD100A SDK

Iris ID provides an API SDK to enable all functions of the iCAM TD100A. The development environment and functionality of the SDK for the iCAM TD100A module closely mimics those of the widely deployed iData SDK for the IrisAccess iCAM4000 series cameras. Application developers familiar with the Iris ID API's will find integration to be very simple.

SDK Versions

Three versions of the SDK are available:

- Image Capture only
- Image Capture & Quality Metrics
- Image Capture, Quality Metrics and Matching

Sample Application Source Code

The sample application source code for the sample GUI will be delivered as a part of the SDK API. Sample SDK code is provided in C++ and C#.

Demonstration Application

A runtime only application is available for customer evaluation which provides the functionality to perform iris and face image capture, and iris template matching.

iCAM TD100A (Iris & Face Camera)

Dimensions (W x H x D)	5.9” x 3.3” x 1.2” (150mm x 83mm x 30.5mm)
Weight	0.5lb (0.23kg)
Power Input	5VDC
Power Consumption	Idle 2.3W Typical 4.3W Max 5.5W
Iris Capture	Automatic Dual Iris Capture Capture Distance 330 +/- 20 mm ISO/IEC 19794-6 Standards Compliant Image High Quality
Face/Scene Capture	2560 x 1920 5MP Image Sensor – 2.3 mm @ F# 2.2
Iris Illumination	Multiband IR
Iris Enrollment	Less than 2 seconds for complete two iris capture Less than 8 seconds for complete transaction (includes face & iris)
Face Capture	ISO/IEC 19794-5 Standard Compliant Image Approximately 1 9”~ 36” from subject for proper framing Manual or Auto Focus available
Scene Capture	Manual or Auto Focus available through API
Sound	Software volume control level Audio files can be uploaded to iCAM TD100A Standard Iris ID sound files are loaded at a tim e of shipment
Speaker	1 W 17mm dia speaker
LCD Display	3.5” Color LCD / 380 NIT
Status Indicator	Blue Blinking – Start Up Blue – Power On Green – Identificati on OK Both Eyes Green Blinking – Identification OK One Eye Red – Reserved Red Blinking – Reserved

Shutter Button	Wake Up / Capture Face / Capture Scene / Force Iris Capture
Meta Data	Available
Operating Range	14” (36 cm)
Operating Temperature	32°F ~ 120°F (0°C ~ 50°C)
Storage Temperature	-4°F ~ 140°F (-20°C ~ 60°C)
Humidity	0% ~ 95% Non-condensing
Certifications	CE, FCC, KC, Eye Safety, ISO Standard

Interface Equipment supplied with iCAM TD100A-U

• High Speed USB 3.0 • USBA3-3 Cable

Interface Equipment supplied with iCAM TD100A

• High Speed USB 2.0 • USB+Power Cable, 5VDC Power Supply 120/240VAC 50/60Hz

PC Requirements

- Operating System: Window® 7(32-bit) /10(32,64-bit)
- Processor: Pentium® 4 1.6GHz or higher
- Memory: 512MB or higher
- Hard Disk: 5GB (Sample Applications) or higher

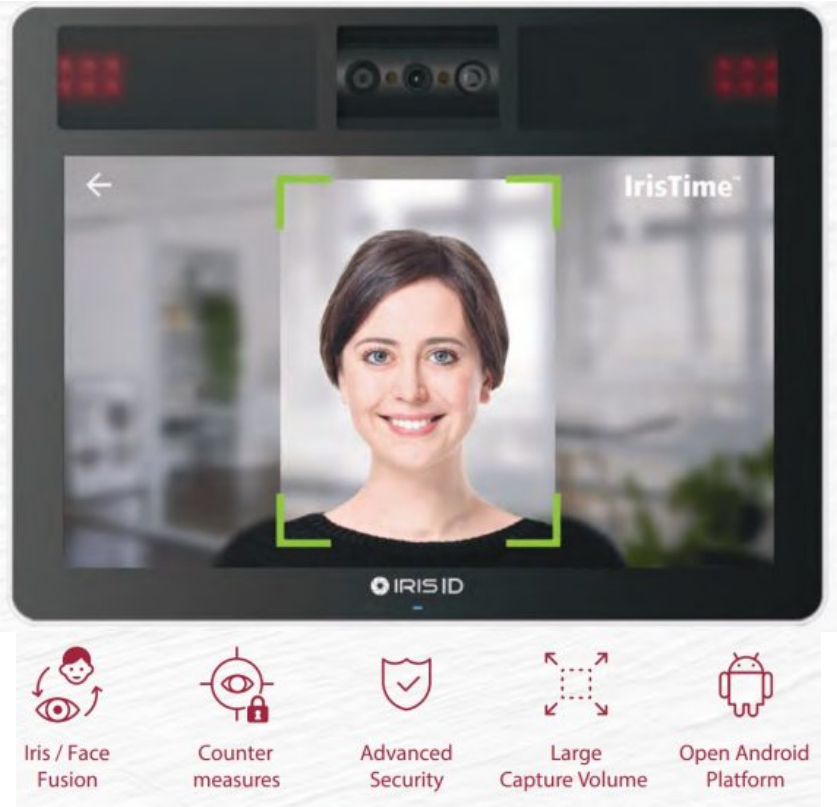
Accessory

- USBA3-3 1.8 M USB cable (incl with iCAMTD100A-U
- iCAM TD100-Case
- Protective Case (sold separately)

IRIS ID AUTHORIZED RESELLER

Iris & Face Recognition iT100

Time Clock for the Modern Workforce



The iT100 is Iris ID’s newest non-contact AI (artificial intelligence) enabled biometric ofiering that features both iris and facial recognition technology. Automatic recognition of iris and/or face is possible. A large capture volume allows for increased exibility, speed and convenience. Enhanced security through Secure Boot and and open Android Platform provides an opportunity for third party application development.

Features

IRIS / FACE Fusion

Operates in Iris only / Face only / and, or, fusion mode. Select and use according to the bbiometric biometric biometric security environment.

Countermeasures

A proven set of anti-spoof measures that continues to set industry standards

 7 inch Multi Touch Display

Easy on device setting & user enrollment available with Self-guidance with live images on 7” multi Touch LCD.

 Automatic Tilt Adjustment

The Camera automatically finds user and moves to a location where the user’s eyes and face can be photographed.

 Large Capture Volume

Quickly and easily authenticates just by looking at the screen with wide recognition range of iris 30~60cm(12~24”) & Face 30~80cm(12~32”).

 Simultaneous Biometric Capture

Automatically captures dual iris and face at the same distance.

 Non-Contact Authentication

Automatically captures faces and iris naturally up to 24 inches or 60 cm.

Eye Safety Certified

Tested and meets UL, ANSI, and international eye safety standards.

 Advanced Security

Information is encrypted, Secure Boot platform and Advanced Network security.

 Open Android Platform

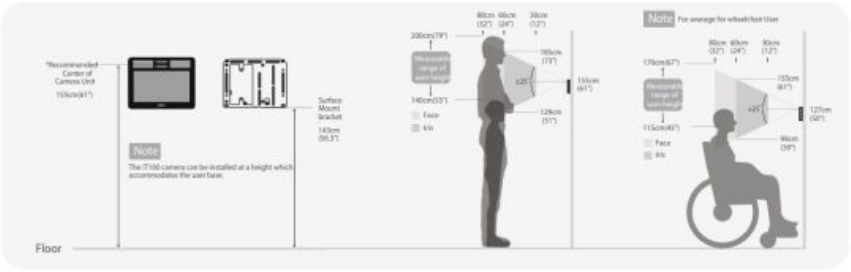
Open Android Platform provides for third party application development.

Specifications

Dimensions (W x H x D)	18cm x 14cm x 3cm (7.1” x 5.4” x 1.2”)
Weight	1.2lbs (543g)
Type	Walk-up
Power Input / Consumption	12 – 24 VDC (auto – +/- 500 mv ripple voltage industry s tandard) / Max. 30watt
OS	Android OS 7.1

User Interface	Self-guidance with displayed images on LCD
Operation	Iris and or Face, Face + Iris Fusion
User Capacity	Up to 10,000 1:N, 100,000 1:1 users
Transactions	Number of transaction logs on device DB: 1M (Iris) / 100 ,000 (Face)
Encryption	AES256
USB	1 Port
Matching Speed	Less than 1 sec
Tilt	Auto Range: -25° ~ +25°
CPU	Cortex A-53 Octa Core
Algorithm	IrisCapture / DualEyeInfo™ / Countermeasure / Face Matching
Real Time Clock	Internal battery
Proximity detection	ToF Sensor
Certifications	CE, FCC, KC, Eye Safety, UL294
Operating Range	Iris Camera: 30 ~ 60cm (12~24“) / Face Camera: 30~80 cm max (12~32”)
Temperature	Operating: 0 ~ 45℃ (32 ~ 113℉) / Storage: -20 ~ 90℃ (-4 ~ 194℉)
Connectivity	Ethernet or Wi-Fi (optional) Relay
Upgradable Hardware	Weigand, GPI, Serial Interface, External Card Reader

Installation



IrisTime™ Solution

Iris ID's IrisTime™ solutions continue to set the standard for integration, performance and versatility for iris recognition. Whether you are looking for a single biometric solution, or a fusion of iris and face recognition, the IrisTime™ product is the answer. Integration with card s, or keypad input is also possible. IrisTime ™ ofiers a built in App, the iTMS Solution and also provides a development environment for the application developer. A REST API provides access to all of the features and functions of the IrisTime™ platform.

iTMS™

The iTMS™ (iT100 Management System) is a device management application that runs on Windows/Mac OS/Linux workstation that can manage multiple iT100's using the REST API. iTMS™ allows the administrator/operator to congure the iT100 so that it can instantly be up and running.

Use Cases

Iris & Face Recognition Reader iA1000

	Iris – Face Fusion Identiication
	Presentation Attack Detection (PAD)
	Intuitive User Interface
	Enhanced Capture Range
	Advanced Security

The IrisAccess® iA1000 series is Iris ID's latest non-contact access control device that captures and authenticates the iris and face simultaneously. The latest generation optical system provides a fast and simple user interface on a circular LCD, resulting in accurate biometric image acquisition and faster authentication. It also provides industry leading security including Presentation Attack Defense (PAD).

The IrisAccess® iA1000 series is available in two configurations, with each model

featuring dual iris and face cameras, along with a new circular user guidance display. Both models are equipped with a touchscreen LCD, Wi-Fi and PoE capabilities, and support OSDP and Wiegand protocols. Optionally, there is an advanced built-in card reader that supports multiple card formats and mobile credentials.

Features

 IRIS – FACE Fusion

Operates in Iris only, Face only, Iris and/or Face, Iris-Face fusion mode.

 Presentation Attack Detection (PAD)

A proven set of anti-spoof measures that continue to set the standard for the industry is included.

 Intuitive User Feedback LCD

A new circular LCD built into the optical system provides user guidance for fast authentication.

 Accommodates All User Heights

The optical system automatically adjusts for user heights and is ADA 508 compliant.

 Enhnaced Capture Range

Wide recognition range of Iris 30-60 cm (12-4″) & Face 30-80 cm (12-32″)

 Simultaneous Biometric Capture

Automatically captures dual irises and face simultaneously at the same distance.

 Non-Contact & Easy Authentication

Automatically captures faces and irises up to 60 cm (24 inches).

Standards Compliant

EC 62471:2006, UL 294, CE, FCC, KC, ROHS, UKCA

 Advanced Security

Supports comprehensive data encryption, advanced network security, and secure boot.

Speciications

Weight	(W x H x D) 18.8 cm x 19.9 cm x 3.4 cm (7.4” x 7.8” x 1.3”)
Type	810 g (1.8 lbs)

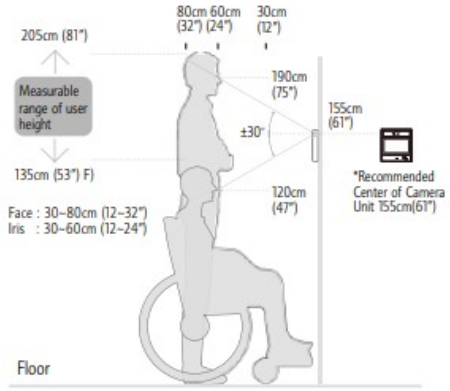
Power Input	Walk-up
Display	24 VDC or PoE+
User Interface	Main Display : 7” LCD and Selfie Display: 3.9 cm (1.54”) cir cular LCD
SELinux	Self-guidance with visual displayed
Operation	Linux
User Capacity	All combinations of Iris, Face, Pin, Card (And/Or Fusion)
Transactions	Up to 100,000 users
Encryption	Up to 1,000,000 on device (up to 100,000 with audit face i mages)
Platform Security	AES-256
Matching Speed	Secure Boot, Root of Trust, SELinux
Languages	Less than 1 sec
Iris Camera	Supports multiple languages/characters simultaneously
Face Camera	2 x 5 MP B/W CMOS image sensor
Dimensions (	13 MP Color CMOS image sensor
Operating Range	Iris Camera: 30-60 cm (12-24″) / Face Camera: 30-80 cm (12-32″)
Tilt	Auto tilt, -30°+30°
Real Time Clock	Iris recognition, Face recognition, Iris/Face PAD, Lens dete ction, Face mask, Eyeglasses detection
Proximity Detection	Rechargeable battery

Card Reader	Ethernet, Wi-Fi, BLE (optional)
Relay	ToF Sensor
PoE+	Prox card reader (125kHz), HID® card reader (13.56MHz) – iCLASS®, Seos® MIFARE®/DESFire® card supported
Indicator	2-Dry contact for door
Certifications	Wiegand In/Out (flexible up to 200 bits and pass through to the access panels)
Temperature	IEEE802.3at compliant, 30 watts
Algorithms	RS232/RS485(OSDP) / RS422
Connectivity	Multi Color LED for power and user guiding
Wiegand	FCC, CE, KC, UKCA, UL294, IATA, KISA, Eye Safety
Serial	Operating: 0-45 °C (32-113 °F)/Storage: -20-90 °C (-4-194 °F)

Model

Model	LCD	PoE	Wi-Fi	Prox 125kHZ	MIFARE®/DESFire® (HID® SEOS/iCLASS®) 13.56MHz	OSDP SELinux
iA1000-WPN	✓	✓	✓	–	–	Linux
iA1000-WPH	✓	✓	✓	✓	✓	Linux

Capture Volume

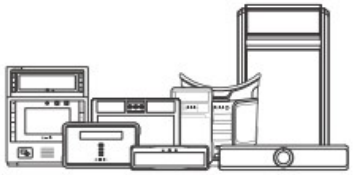


IrisAccess® Management Suite (iA-MS™)

iA-MS™ provides a centralized web-based application for managing iA1000 devices, users, and transaction logs. It offers a user-friendly graphical interface (GUI) that simplifies configuration and monitoring tasks, making it accessible to both technical and non-technical users. Using REST APIs, the application enables real-time data exchange and efficient management of iA1000 devices. Operators can easily authenticate and activate iA1000 devices, track activities, and review transaction logs, all from an intuitive interface that requires minimal training. This solution is ideal for enterprise level applications to provide device and user management from a single or multiple locations to meet your access control needs.

Use Cases

IRIS ID AUTHORIZED RESELLER



IRIS ID
Advanced Identity Authentication™

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www.irisid.com I sales@irisid.com

Documents / Resources

	IRIS ID iCAM D2000 Multi Biometric System [pdf] User Manual D2000, iCAM D2000 Multi Biometric System, iCAM D2000, Multi Biometri c System, Biometric System, System

References

- Home - Iris ID
- User Manual

IRIS ID

Biometric System, D2000, iCAM D2000, iCAM D2000 Multi Biometric System, IRIS ID, Multi Biometric System, System

—Previous Post
IRIS ID IRISTIME iT100 Series Multi-Biometric Authentication Device User Manual

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