

**IG-AD100<sup>®</sup>**  
- Iris Camera System -  
**Product Sheet**





IG-AD100® Iris Camera System

### Overview:

Built on the proven IrisGuard technology platform, the IG-AD100® gives users a new exhilarating experience in personal identity. With the new, fast dual eye acquisition environment which provides greater ease of use, significantly improved dependability, improve usability, accuracy and reliability. The IG-AD100® is a commendable successor to the award winning IG-H100® Camera system currently deployed in worldwide operation via applications as varied as Homeland Security, Illegal Immigration, Border Control, Banking & Finance, Humanitarian Relief, Health Care and Entry Access Control.

### FEATURES

- ✓ Multi-Modal Iris & Face
- ✓ Intuitive & Easy-to-Use
- ✓ Pristine Accuracy
- ✓ Superior Image Quality
- ✓ Blazingly Fast
- ✓ Supreme Countermeasures
- ✓ Effortlessly Programmable
- ✓ Operationally Proven
- ✓ Cost Effective
- ✓ Best User Experience
- ✓ Enlarged Capture Area

### APPLICATIONS

- ☞ Illegal Immigration
- ☞ Border Control
- ☞ e-Passport Programs
- ☞ Financial and Banking
- ☞ Transportation, Travel and e-Gates
- ☞ Law Enforcement Security
- ☞ Physical/Restrictive Access
- ☞ Time & Attendance
- ☞ Voter Registration Applications
- ☞ Retail Point-of-Sale (POS) Kiosks
- ☞ Social Security Applications

## Key Features

### Iris Optics

The IG-AD100® dual eye auto-focus iris camera incorporates the state-of-the-art specially designed, developed and manufactured optics by IrisGuard research and development laboratory in the UK. The camera incorporates two pristine CMOS progressive scan sensors provides low-noise, high sensitivity in the near NIR wavelength hence offering the most superior quality Iris ISO/IEC 19794-6 compliant images known today. The camera lenses were expressly designed with holistic iris recognition deployments in mind. The camera is ideal for applications such as illegal immigration, border clearance checkpoints, airport security, military installations and other large-scale national deployments.



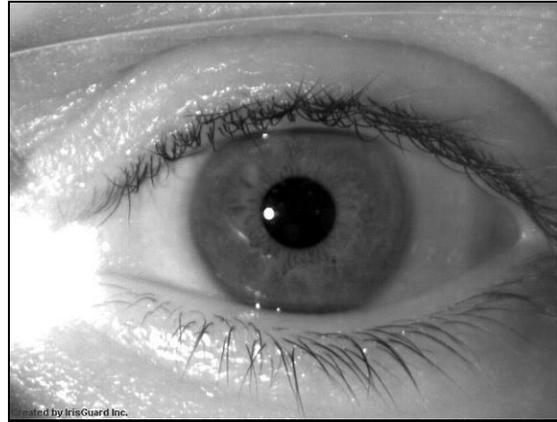
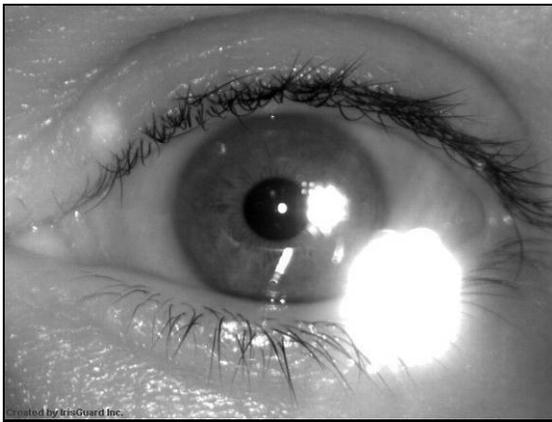
### Face Optics

The IG-AD100® facial recognition camera optimized for facial recognition applications. Specifically designed to meet all aspects of facial biometric technologies including the provision of optimal ISO/IEC 19794-5 images. The combination of Face and Iris unleashes the power of the IG-AD100® multi-modal capture device. The high-resolution camera captures multiple face images in a fixed field of view, under normal lighting conditions. The face camera is perfectly suited for application such as border clearance checkpoints, airport security, military installations and ID-Travel Document applications.



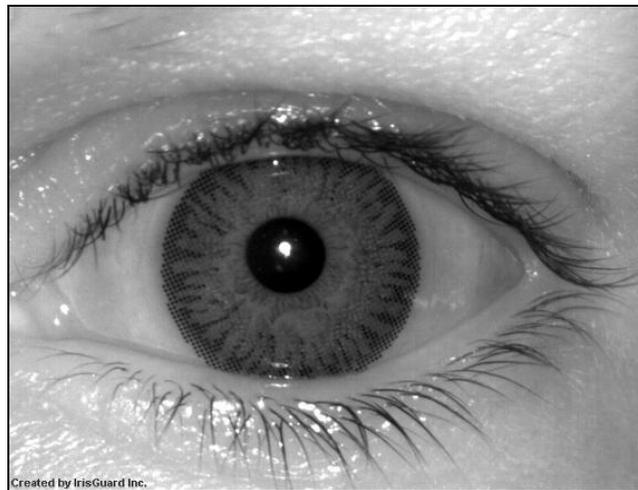
### Glasses Detection

The AD-100® camera has an innovative automatic Eye Glasses/ Spectacles Detection and processing function that alleviates the effects of specular reflections and no longer requires users to remove their spectacles during recognition. The World Health Organization estimates that over 161 million people worldwide have a visual impairment not to mention an estimated thirty per cent of the world's population that wear spectacles. The challenging "Eye Glasses Detection" breakthrough in iris recognition is due to the AD-100® built-in direct and cross illumination capabilities not found in other cameras on the market today



### Countermeasures

The IG-AD100® camera has native built-in passive, behavioral and dynamic countermeasures to detect Eye Liveness detection; Cosmetic contact lenses spoofing; Replay attacks and their denial using IrisGuard bespoke hardware and built-in flash illumination tickler and advanced software countermeasures mechanics. Further countermeasures detect severe head tilting, abnormal pupil dilation and other high-security features in-order to reduce vulnerability to malign attacks. Additionally involuntary pupillary unrest techniques are triggered through the built-in auto flash elements whereby the flash/tickler is automatically activated based on low ambient light conditions or based on individual pupil dilation readings.



## LCD Display

The IG-AD100® offers system integrators a unique liquid crystal display (LCD) device that is prized by engineers and integrators due to the easy programmable API Control Display interface. The LCD displays two Lines of 16 ASCII white characters on a blue background which offers 4 virtual 2 x16 character buffers for displaying sequential user messages automatically.



The IG-AD100® Dual Eye Imager Camera System

## Stereo Speakers

The IG-AD100® sound-system provides 1W BTL Stereo amplifier sound in 8Bit Stereo format offering Multi-lingual capabilities. Programmers and System integrators can personalize the voice prompts at will; providing dynamic sound feedback to users upon recognition. Voice prompts can be uploaded via pre-recorded WAV files in real-time, supports DirectX and Direct Show. The imager is ideally well suited for border clearance, time and attendance applications.

## Microphone

Incorporated into the IG-AD100® is an omni-directional Microphone which can be programmed under application control using DirectX or compatible software, ideal for Physical Access control applications allowing the applicant to liaise directly with a Command & Control System operator.

### Camera Illumination

The IG-AD100® camera light, emanates from NIR Wavelength Illumination, purposely designed in-order to facilitate IrisGuard's tailored camera countermeasures (See below) with accurate iris illumination we manage all human eye variants without discrimination. The camera uniquely exploits both Direct and Crossed illumination to overcome specular reflection from persons wearing reading spectacles a unique feature not found in any competitive product on the market today.

### Intuitive Man-Machine Interface

The IG-AD100® unique large size horizontal mirror fitted on the front panel that provides intuitive "eye to camera" alignment that tremendously reduces Failure-to-Acquire Rates (FTA). Eye spacing varies greatly between different ethnic groups the IG-AD100® manages interpupillary distance (IPD) ranges (42mm to 80mm) that are tried and tested to work with all known human morphologies. Furthermore the camera uses a white light filter which removes UV reflections and glare, hence providing an intuitive, and easier to maneuver positioning interface. The IG-AD100® camera provides a new innovative "Fine focus" technique: where perfect focusing is achieved regardless of unique individual cranial bone shape, obstructive headwear or hair-dress all of which negatively interfere with distance sensor technology. The imager uses a combination of distance sensor and image analysis to drive the automatic focus setting for a perfect focus in each case.



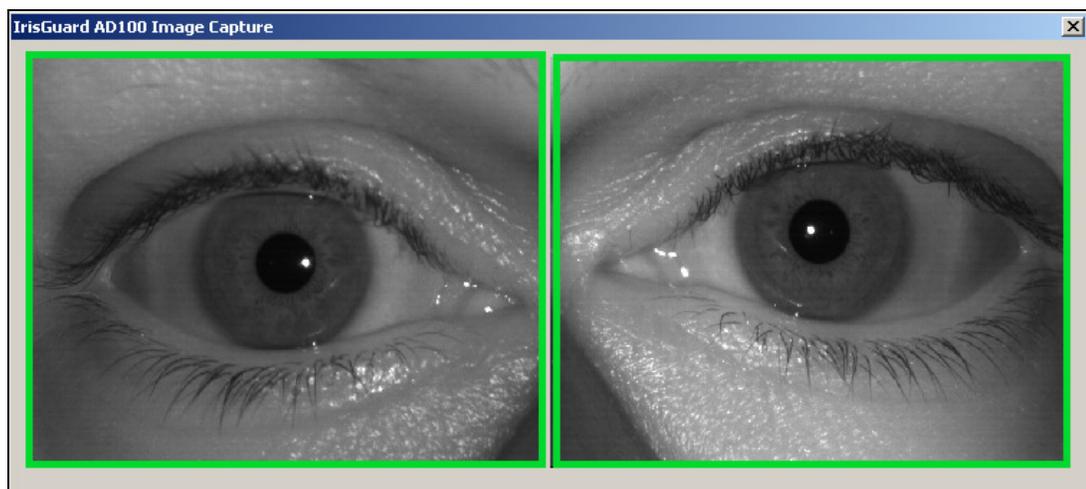
### Camera Function Buttons

The IG-AD100® camera has a series of four custom color coded function buttons that are application programmable and specifically developed with system integrators and software developers in mind. Perfectly suited for Access Control, Automated Kiosks, Bank ATM machines and Time and Attendance applications. The function buttons extends various capabilities of camera functionality and provide users an intuitive means to interface with a system operator.



### User Detection and Positioning Guidance

The IG-AD100® camera has a built-in user range sensor to detect an individual's presence and the camera also provides application driven multi-lingual vocal guidance and visual indicators to assist the user- during iris acquisition operations. Additionally the IG-AD100® camera locates a person's eyes flawlessly without requiring person to adjust their position. The IG-AD100® camera exploits fully the specially designed wide/narrow field angle imagery processing to examine a wider field of view and locates the user's eyes wherever they are positioned in front of the device. The imager has a very deep capture-box of 16cm whereby a person eyes can be acquired anywhere within a range from 21cm to 37cm away from the unit and be perfectly authenticated within the range. The unit exploits the state-of-the-art proprietary designed glass lenses to achieve this enormous range in addition to advanced built-in Macro-photography techniques. Finally the camera provides a "Head Tilt detection" routine whereby the angle of a person's head-tilt is monitored to prevent tilting beyond maximum allowed algorithmic search ranges.

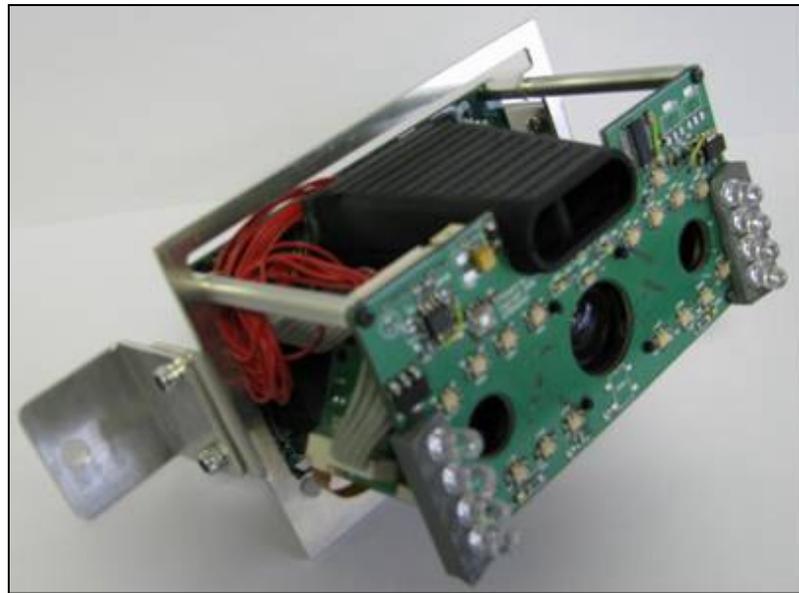


## Integration

The IrisGuard SDK (Software Development Kit) is a software development kit that contains header files, libraries, samples, documentation and tools utilizing the IG-AD100® APIs required to develop applications for the camera platform. The SDK can be used to write applications that target Windows platform such as Windows XP and Windows Server 2003 as well as Windows Vista.

## IG-AD100® OEM Version

The IG-AD100® OEM module is a unique versatile and compact IG-AD100® camera module for seamless integration allowing System Integrators that prefer not to design their own camera solution or/and are unable to integrate existing iris cameras can now rely on IrisGuard's sensor integration module to effortlessly enhance existing and new applications such as e-Gates, Kiosks, Point-of-Sale, ATM's etc. All of the features and technical data are identical to the standard IG-AD100® cameras described above. The OEM module makes a perfect choice to interface with any embedded systems.



IrisGuard IG-AD100®-OEM Module

## IG-AD100® Iris Camera Specifications

### PC Requirements

To install the IG-AD100® IRT Camera set-up software, the PC/enrolment station should meet the following minimum requirements.



- IBM PC or 100% compatible
- Microsoft® Windows® 2000 Professional, SP4 or later
- Microsoft® Windows® XP Professional, SP2 or later
- Microsoft® Vista® SP1 or later
- Dual Core ® Processor (2Ghz Minimum)
- 160GB hard drive space (min)
- 1Gbytes RAM (min)
- CD Rom
- Monitor and keyboard
- Video Display set at 800 x 600 resolution
- USB 2.0 Hi Speed (480Mbs)Hardware and Software capable
- DirectX 8.1 or greater

| IG-AD100® General                  |  | AC to DC Power Supply            |  |
|------------------------------------|--|----------------------------------|--|
| <b>Dimensions</b>                  | 192mm (W) x 120mm (H) x 122mm (D)                        | <b>Input Voltage</b>             | 90 - 264Vac  |
| <b>Weight</b>                      | 700g (excluding Mounting device)                         | <b>Output Voltage</b>            | 12Vdc Regulated  |
| <b>Power Standby</b>               | <b>Source:</b> 12Vdc<br><b>Consumption:</b> 5 Watts max  | <b>Output Current</b>            | 1.2 Amps (14.4watts) Max   |
| <b>Power Operating</b>             | <b>Source:</b> 12Vdc<br><b>Consumption:</b> 10 Watts max | <b>Output Voltage Regulation</b> | < +/- 5%   |
| <b>Iris Image Acquisition Time</b> | Dual Iris capture < 4seconds (Normal Conditions)         | <b>Case Size</b>                 | 91mm x 38mm x 36mm   |
| <b>Storage Temperature</b>         | -10° C to + 60° C  | <b>Input Connector</b>           | IEC 320 socket   |
| <b>Operating Temperature</b>       | 0° C to + 40° C  | <b>Output Connector</b>          | 2.5mm power plug   |
| <b>Humidity</b>                    | 30% to 80%   | <b>Approvals</b>                 | UL, CUL, GS/TUV, CE, FCC & CB<br><br><b>FCC</b> |
| <b>Approvals</b>                   | <b>CE FC</b>   | <b>EMI</b>                       | FCC/EN55022 Class B  |
| <b>Eye safety</b>                  | Meets  |                                  |  |
| Input / Output                     |  |                                  |  |
| <b>USB</b>                         | USB 2.0 Hi-Speed (480Mbs)                                |                                  |  |
| <b>Power Supply Input</b>          | 2.5mm free socket  |                                  |  |

## About IrisGuard

IrisGuard, Inc. provides large-scale iris biometric commercial and government security solutions focused on managing government requirements worldwide.

IrisGuard supports government and private enterprises as well as system integrators in building large-scale iris solutions requiring pristine camera devices, performance, scalability and accuracy.

The IFA NextGen® architecture integrates seamlessly with existing government applications. IrisGuard provides complete end-to-end solutions including the manufacturing of high quality (CE & US certified) iris cameras, the robust and innovative Iris Farm Architecture and all the application software development tools needed to enable integrators to incorporate large-scale national deployments.

IrisGuard has deployed the world's first and largest National Iris Recognition Illegal Immigration solution in the United Arab Emirates and has been commissioned by Cairo Amman Bank (Amman, Jordan) to install the first iris biometric identification system to authenticate banking transactions for its customers.

Learn more at <http://www.irisguard.com>  
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