

BROCHURE

# IriShield™ Series

An ultra compact, auto-capture iris scanner, complete with on-board iris recognition and a PKI-based security infrastructure that ensures end-to-end data security.



# The best selling iris recognition device series



## Features

- **Secure on-board processing:** All key functions like iris capture, iris recognition, encryption and digital signature are done on-board in a secure environment.
- **Secure data & communication:** Each IriShield device has its own 2048 bit RSA key securely generated on-board for encryption and digital signature.
- **NIST-proven extremely accurate iris matching algorithm**
- **STQC certified**
- **Internal gallery for universal version:** 1000 iris templates (500 IDs)
- **Supported interface connections:** USB
- **Supported OS's:** Android/Windows/Wince/Linux/eLinux/Mac

(※ Specifications & Color to change without notice)

## Why IRITECH?

IriTech, Inc. is one of very few iris providers who owns all in-house proprietary technologies vital for deploying any scalable end-to-end iris ecosystem. With more than 20 years of experience in iris recognition technology and top-ranked NIST<sup>1)</sup>-proven algorithms, IriTech has been trusted by many prestigious clients. Our systems have been deployed in multiple large-scale projects ranging from governments to corporates due to its exceptional performance in tough environment. IriTech is proud to be the partner of choice, leading the iris biometrics technology.

<sup>1)</sup> National Institute of Standards and Technology

## Overview

The IriShield™ Series features IriTech's superior iris matching and iris image quality assessment algorithms to provide good quality images and avoid false positives while maximizing true positive identification rates. The embedded algorithms can complete a matching query against 1000 stored templates in 0.5 second.

## Advantages

- Cost-effective
- Ultra-compact, light weight
- Supporting power management functions
- FREE Software Development Kit (SDK)

## Product Packages

- **OEM Module:** Ready to be integrated seamlessly into existing product lines
- **Encased device:** Portable and ready-to-use, ideal for biometric service providers or value-added resellers to develop applications systems

## Product Highlights

The first camera to receive STQC certification for authentication device for UIDAI project (2014)

Trusted and deployed in many large-scale government projects

Monocular camera's well-known projects: India UIDAI, China Public Safety, Kenya Ministry of Education Science and Technology

Binocular camera's well-known projects: India UIDAI, FBI/SOCOM, Colombia Police Department, China Coal & Mining, UNHCR

## ≡ Technical specifications

	MK 2120UL	MK 2120U	MO 2121	BK 2121U	BO 2121
					
<b>Capture Mode</b>	Auto				
<b>Capture Distance</b>	15 – 16 cm (5.9 – 6.3 in) from the camera front; Focal Depth = 1.0 cm (0.4 in); Optimal distance = 15.5 cm (6.1 in) from the camera front; Field of View = 3.9 x 2.9 cm at 15.5 cm (1.5 x 1.1 in at 6.1 in)	4.7 – 5.3 cm (1.8 – 2.1 in) from the image sensor; Focal depth = 1.0 cm (0.4 in) Optimal distance = 5.0 cm (2 in)	13.5 – 14.5 cm. (5.3 – 5.7 in) from the image sensor; Focal depth = 1.0 cm (0.4 in); Optimal distance = 14 cm (5.5 in); Field of View = 3.3 x 2.4 cm at 14 cm (1.3 x 0.9 in at 5.5 in)	13.75 – 15.25 cm (5.4 – 6.0 in) from the front of camera lens; Focal Depth = 1.5 cm (0.6 in); Optimal distance = 14.5 cm (5.7 in); Field of View = 3.3 x 2.4 cm at 14.5 cm (1.3 x 0.9 in at 5.7 in);	
<b>Image Format</b>	ISO Standard 19794-6 (2005 & 2011), (640 x 480 Pixels, 8 bit Grayscale), full support of K1, K2, K3, K7				
<b>Sensor Resolution</b>	VGA (640 x 480 Pixels)				
<b>Dimensions</b>	51.2 x 92.6 x 15.1 mm (2 X 3.6 x 0.59 in)		36 x 40 x 6.9 mm (1.4 x 1.6 x 0.3 in) Camera Module: 48 x 17.5 x 7.9 mm (1.9 x 0.7 x 0.3 in)	124 x 63.2 x 42.5 mm (4.9 x 2.49 x 1.68 in) Goggle: 200 x 145 x 72 mm (7.9 x 5.7 x 2.8 in)	47 x 40 x 6.9 mm (1.8 x 1.6 x 0.3 in) Camera Module: 31 x 27 x 23.3 mm (1.2 x 1.1 x 0.9 in)
<b>Power</b>	Single USB Bus Powered (DC + 5V ± 5%) (Max power consumption = 300 mA)	Single USB Bus Powered (DC + 5V ± 5%) (Max power consumption = 250 mA)	Single USB Bus Powered (DC + 5V ± 5%) (Max power consumption = 280 mA)	Single USB Bus Powered (DC + 5V ± 5%) (Max power consumption = 430 mA)	
<b>Illumination</b>	Near infrared LED (810nm)				
<b>Environmental</b>	-20°C to +60°C (Storage); 0°C to +50°C (Operating); 0% to 90% Humidity (Non-Condensing)*				
<b>Usage</b>	Indoor; Outdoor (avoid direct sunlight and bright reflections)				
<b>Compliance &amp; Certificates</b>	Eye safety standard (IEC 62471:2006-07, IEC 60825-1), RoHS, FCC-Class B*, IP54* (IP65 for BK 2121U)				
<b>Resolution</b>	Monocular: Spatial ≥ 50% @ 1.0 Lp/mm, Pixel ≥ 10pixels/mm Binocular: Spatial ≥ 60% @ 4.0 Lp/mm, Pixel ≥ 18pixels/mm				
<b>Connectivity</b>	USB 2.0				
<b>Security</b>	RSA (2048-bit) and AES (256-bit); X509 Certificate, PFX/PKCS#12 Certificate, RSA key pair generated on-board				
<b>Matching Speed</b>	2000 matches per second (exclusive of communication time between the camera and the host)				
<b>Ancillary SW</b>	Drivers, SDK (C/C++, .NET, C#/VB, Java), Demo Application with Sample codes				
<b>Host OS</b>	Windows Family (32-bit/64-bit), Linux Family (Ubuntu 32-bit/64-bit, ...), WinCE, Embedded Linux, Android (>= 3.1), Mac				

(\* Encased model only)

---

# Contact information

## Headquarters

11166 Fairfax Boulevard,  
Suite 302, Fairfax, VA  
22030, USA  
Tel: +1 703-877-2135  
Fax: +1 703-877-2136

## South Korea office

A-801, Daesung Dipolis Knowledge  
Industry Center, 606, Seobusaet-gil,  
Geumcheon-gu, Seoul 08504, KOREA  
Tel: +82 2-872-3812  
Fax: +82 2-872-3815

## Viet Nam office

8th Floor, VPI-08, BCONS TOWER  
Building, 176/1 - 176/3 Nguyen Van  
Thuong St., Ward 25, Binh Thanh  
District, Ho Chi Minh City, Vietnam.  
Tel: +84 8-6297-9480

## India office

320, Raheja Arcade, Koramangala,  
Bangalore - 560095  
Landline: +91 80-41643057  
Phone: +91 98-45025278

## Get in touch

Email: [info@iritech.com](mailto:info@iritech.com)  
Website: [www.iritech.com](http://www.iritech.com)