June 2021

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.

Iritech, Inc.

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**: 1000 iris templates (500 IDs)
- **Supported interface connections**: USB, UART
- **Supported OS's**: Android/Windows/WinCE/Linux/ eLinux/ Mac/Proprietary OS/Non-OS

(※ 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[1)]–proven algorithms, IriTech has been trusted by many prestigious clients. Our systems have been deployed in multiple and multisector 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.

1) 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

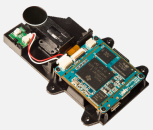
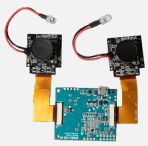
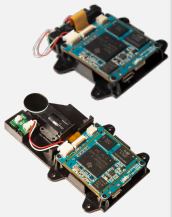
The first camera to receive STQC certification for authentication device for UIDAI project (2014)

Trusted and deployed in many large-scale government projects (2005-2015)

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 2120	MO 2121	BK 2121U	BO 2121	UART Version
							
Capture Mode	Auto						
Capture Distance	14.0 – 15.0 cm (5.5 – 5.9 in) from the camera front; Focal Depth = 1.0 cm (0.4 in); Optimal distance = 14.5 cm (5.7 in) from the camera front; Field of View = 3.3 x 2.4 cm at 14.5 cm (1.3 x 0.9 in at 5.7 in)	4.7 – 5.3 cm (1.8 – 2.1 in) from the image sensor; Focal depth = 6 mm (0.2 in) Optimal distance = 5.0 cm (2 in)		13.0 – 14.0 cm. (5.1 – 5.5 in) from the image sensor; Focal depth = 1.0 cm (0.4 in); Optimal distance = 13.5 cm (5.3 in); Field of View = 3.3 x 2.4 cm at 13.5 cm (1.3 x 0.9 in at 5.3 in)	13.5 – 14.5 cm (5.3 – 5.7 in) from the front of camera lens; 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 15 cm (1.3 x 0.9 in at 5.9 in);	14.0 – 15.0 cm (5.5 – 5.9 in) from the front of camera lens; Focal Depth = 1.0 cm (0.4 in) Optimal distance = 14.5 cm (5.7 in); Field of View = 3.3 x 2.4 cm at 15 cm (1.3 x 0.9 in at 5.9 in)	*See MO 2120 & MO 2121*
Image Format	ISO Standard 19794-6 (2005 & 2011), (640 x 480 Pixels, 8 bit Grayscale), full support of K1, K2, K3, K7						
Sensor Resolution	VGA						
Dimensions	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: 30 x 15.4 x 7.1 mm (1.2 x 0.6 x 0.3 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)	*See MO 2120 & MO 2121*
Power	Single USB Bus Powered (DC + 5V ± 5%) (Max power consumption = 250 mA)			Single USB Bus Powered (DC + 5V ± 5%) (Max power consumption: MK 2121U = 350 mA, and MO 2121 = 280 mA)	Single USB Bus Powered (DC + 5V ± 5%) (Max power consumption = 430 mA)		External powered (DC + 5V ± 5%) (Max power consumption: MO 2120 = 220mA, and MO 2121 = 260mA)
Illumination	Near infrared LED						
Environmental	-20°C to +60°C (Storage); 0°C to +50°C (Operating); 10% to 90% Humidity (Non-Condensing)*						
Usage	Indoor; Outdoor (avoid direct sunlight and bright reflections)						
Compliance & Certificates	Eye safety standard (IEC 62471:2006-07), RoHS, FCC-Class B*, IP54*						
Resolution	Spatial : ≥ 60% @ 4.0 Lp/mm, Pixel : ≥ 16 Pixels/mm						
Connectivity	USB 2.0 (IriShield -USB Series), UART/ RS-232 (IriShield -UART Series)						
Security	RSA (2048-bit) and AES (256-bit); X509 Certificate, PFX/PKCS#12 Certificate, RSA key pair generated on-board						
Matching Speed	2000 matches per second (exclusive of communication time between the camera and the host						
Ancillary SW	Drivers, SDK (C/C++, .NET, C#/VB, Java), Demo Application with Sample codes						
Host OS	Windows Family, Linux Family, WinCE, Embedded Linux, Android, Mac, proprietary OS or Non-OS						

(* Encased model only)

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