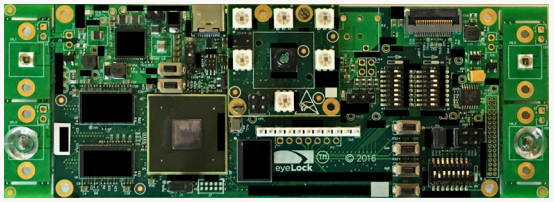
eyeLock®
Advanced Iris Identity Authentication

HARRINGTON
REFERENCE DESIGN

HIGH SECURITY MADE SIMPLE.

Harrington is a self-contained, standalone iris enrollment and authentication system that is offered as a complete reference design. This solution is a superior combination of optical and algorithmic elements that enable absolute security and unmatched ease-of-use. Harrington includes off-the-shelf near-infrared illumination, a commercially available image sensor, proprietary lensing for illumination and the image sensor, and leading-edge enrollment and authentication algorithms. This design is ideal for diverse markets, including Medical/Healthcare, Enterprise (including secure printing), Home Security and Lottery/Casino. There are a rich variety of system interface topologies available to the end-user. There are three different image sensor lensing options that allow nominal working distances between 30 cm and 60 cm with imager module thicknesses between 3.0 mm and 5.7 mm. Dual iris enrollment and single- or dual-iris authentication is supported with software and algorithms that are portable to the OS used in the OEM device.



THE GOLD STANDARD IN BIOMETRICS

- Every iris is unique - second only to DNA as a definitive identifier.
- Extremely high level of entropy prevents a stolen biometric template from being re-used.
- Single-iris False Match Rate of 1 in 1.5 million.
- Robust liveness detection.
- Anti-spoof protection.
- Enables identity certainty and data protection/integrity.

EyeLock is an acknowledged leader in advanced iris authentication for the Internet of Things (IoT). Our proprietary pulsed illumination method reduces power consumption, increases IR safety, and improves performance. EyeLock provides a whole system solution for iris authentication hardware, software, optics, algorithms, and backend matching.

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FEATURES

USABILITY
- "Arms-length" working distance.
- Works with eyeglasses.
- Works with most sunglasses.
- Works in daylight and darkness.
- Hygienic -- nothing to touch, no biometric left behind.
- Liveness testing and authentication in less than a second.

HARDWARE/MECHANICAL
- Near-infrared illumination LED(s)
- 5 megapixel monochrome imager with MIPI interface
- Optical solutions for nominal 30 cm, 45 cm, and 60 cm "Working Distance".
- Imager module thickness (z-dimension) 3.0 mm (30 cm), 4.1 mm (45 cm) and 5.7 mm (60 cm)
- 32bit ARM SoC.
- Secure memory.
- Tamper detection.
- Communication protocols including USB, I2C, UART, SD, audio in/out, & CAN on-board, with provisions for expansion boards supporting WIFI and Bluetooth.
- Reference board dimensions: 52 mm x 147 mm
- Example enclosure dimensions: 80 mm x 151 mm x 30 mm (USB Type C connector only).

SECURITY
- Single iris False Match Rate (FMR) of 1 in 1.5 million.
- Optional dual-iris authentication.
- False Non Match Rate (FNMR) less than 2%.
- Robust liveness testing.
- Anti-spoof protection.
- Revocable/recallable biometric template.
- AES 256 encrypted biometric template.

SOFTWARE
- Portable to Linux, Android, Windows, and iOS.
- Flexible matching topologies: 1:1, 1:few, 1:many, local, network, cloud, multifactor.
- Algorithms are portable to a secure processing environment.
- Algorithms library available to support customer application creation.
- EyeLockApp: sample Java code available for streamlined customer software development.

SAFETY/COMPLIANCE
- IEC 62471:2006 & CIE S009/E-002 IR lamp safety standard.

APPLICATIONS / ENVIRONMENTS

FOR MORE INFORMATION, PLEASE CONTACT EYELOCK AT EMBEDDED_APPLICATIONS@EYELOCK.COM