DMX-10E

Compact Desktop Iris Recognition System

Product Description

The CMITech DMX-10 is a desktop iris biometrics imaging device that simultaneously and quickly captures highest quality iris biometric images. Easy to use, the system's simple and intuitive user interface makes positioning fast and repeatable, even for subjects with no or minimal acclimation. The advanced image capture and processing architecture offers the fastest iris biometric capture speeds in the industry.

The DMX-10 is ideal for emerging logical access control solutions and other authentication applications that require a compact and cost effective iris capture device.

Developed with the latest in system design technologies by one of the leaders in the industry, the DMX-10 is physically robust, highly reliable and durable.

Dedicated to building trust with end-users and partners alike, CMITech's products and technology are leading the industry in cost effective and easy to use iris recognition solutions across the full range of identification and authentication applications.

Key Features

Feature	User Advantages
• **State-of-the-art optical design**	The optical design includes utilizing highest quality optics and very fast shutter speeds, which allows the systems to exceed industry standards for image quality. The measured modulation transfer function exceeds the ISO 19794-6 specification of 4.0 lp/mm at 60% contrast ratio.
• **Advanced, proprietary stereoscopic eye localization**	The DMX-10 accurately locates the position of both eyes in 3D in near-real time to optimize subject ease of positioning and iris image quality. This feature enables the fast and reliable subject distance positioning indicators.
• **Simple and repeatable subject user interface**	Subject positioning is simple and intuitive. The subject merely aligns his / her eyes with the positioning mirrors, and then moves toward or away from the system based on simple, colored LED indications: • Blue is too far away; • Red is too close: and • Green is OK.

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Feature	User Advantages
• **Proprietary optics for positioning indicators eliminate parallax viewing problems**	The proprietary and patented design of the color LEDs for distance positioning can only be viewed by one eye at a time, eliminating any parallax viewing problems that might cause the subject to reposition his / her head. The result is a smooth and intuitive positioning experience, even if the subject's head is Slightly tilted to one side.
• **Simplest of user instructions**	The combination of the easy to use positioning features also means that the instructions to subjects are simple and straightforward. The subject is merely instructed to: • Place the reflection of his / her eyes in the center of the mirrors; • Look at the colored LEDs and move his / her head toward or away from the system according to color; • When the colored LED is green, hold the position for about 1 second and open eyes slightly.
• **Large depth of capture of 30 mm**	The very large depth of capture enhances robustness and ease of positioning.
• **High speed, simultaneous dual imagers**	Dual iris imagers acquire iris images at very high speed, 30 frames per second. The system controller monitors in near real time various quality metrics to determine which iris image pairs should be selected as the biometric samples.
• **Near-real time off-axis gaze detection**	Detection of subject gaze angle (i.e. whether the subject is looking directly ahead at the imager), which is essential for optimal iris biometrics. If the subject is looking away, the system will automatically wait to capture a valid iris biometric image until the subject does look straight ahead.
• **Motion detection**	System calculates eye motion relative to the system, and waits until subject meets motion threshold (which is adjustable) in order to assure there is no adverse motion blurring.
• **Monochromatic face image capture**	A black and white face image is captured in synchronization with the biometric iris images, so that the data record consists of one face image and two iris images. The face images do not qualify as ISO standard, and therefore are not intended for face recognition or an ID card photo purposes, but are intended for manual verification of the subject's identity and association in the data record with the iris images.
• **Very wide interpupillary distance range of 45 to 85 mm**	The wide interpupillary distance range accommodates all adults and young children, making it ideal for large scale, public authentication programs.
• **Compact, lightweight design**	Very small size of design optimizes placement or mounting options.

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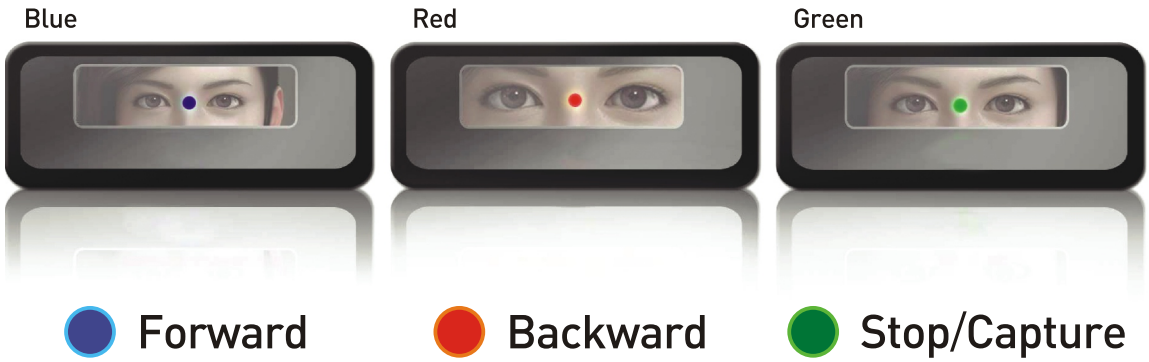
User Interface

Simplest and most repeatable subject interface available:

- Subject places eyes in middle of partially transparent mirrors, then
- Adjusts distance according to easy-to-use 3 color indicator.



Technical Specifications

Dimensions	219 x 161 x 58 mm (8.6 x 6.3 x 2.3 inches)
Weight	215 grams (7.6 ounces) without base
Image output	Meets ISO 19794-6 ; exceeds 4.0 lp/mm @ > 60% contrast
Iris diameter	240 pixels for average 11.5 mm diameter iris (200 to 285 pixels for full range of 9.5 to 13.5 mm diameter irises)
Iris image pixel resolution	640 x 480 pixels, 8 bits Supports multiple formats
Operational iris imaging distance (stand-off range)	315 to 345 mm (12.4 to 13.6 inches)
Depth of field	30 mm (1.2 inches)
Inter-pupillary distance covered	45 to 85mm (1.8 to 3.4 inches)
Time of capture	About 1.0 second, typical, from time subject's eyes are placed within capture volume
IR illumination for iris imaging	Dual LED: wavelengths of 850 nm nominal (~ 50%); and 750 nm nominal (~ 50%)
Subject positioning LED indicators	Blue: Subject too far away Red: Subject is too close Green: Subject within capture volume
Maximum user positioning speed	125 mm per second (4.9 inches per sec.) in "Z" direction
Operating temperature range	0 to 40°C
Humidity	10 to 90% RH, non-condensing
Eye safety standard	IEC 62471
Interface	USB 2.0 High Speed

Technical Specifications, continued

Power	Independent power supply required: 2,000 mA at 5.0 V (supplied with system)
PC hardware and OS requirements	Intel® Atom™ or above processor Windows XP 32 bit or above Linux OS version of SDK and drivers in progress
Other certifications	CE, FCC, RoHS, WHQL

Please contact CMITech or your representative for more information on the CMIRIS Software Development Kit (SDK), and the CMITech Demo / Evaluation Package that includes all drivers.

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