



DMX-30

Cost-effective and Easy-to-use Desktop Iris Recognition System

Product Description

The CMITech DMX-30 is a desktop iris biometrics imaging device that 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 little or no acclimation. The advanced image capture and processing architecture offers the fastest iris biometric capture speeds in the industry.

The DMX-30 is ideal for emerging logical access control solutions and other single user 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-30 is physically robust, highly reliable and durable.

Key Features

Feature

State-of-the-art optical design

User Advantages

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-30 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.

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 experience, even if the subject's head is positioned slightly 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 sensors

Dual iris sensors 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 sample.

Near-real time off-axis gaze detection

Capturing the correct position of the eyes is essential for optimal iris biometrics. The system automatically detects subject gaze angle (i.e. whether the subject is looking directly ahead at the imager). If the subject is looking away, the system will automatically wait until the subject looks straight ahead before capturing a valid iris biometric image.

Motion detection

System detects subject eye motion during the capture sequence, and waits until subject meets motion threshold (which is adjustable) in order to assure there is no adverse motion blurring.

Feature

Monochromatic face image capture

Very wide interpupillary distance range of 45 to 85 mm

Compact, lightweight design

Optional Extended Depth of Capture to 6.0 cm (new)

User Advantages

Black and white face images are collected in synchronization with the biometric iris images, so that the data record consists of one face image and two iris image. The face images do not qualify as ISO standard, and therefore are not intended for face recognition or an ID card photo, but are intended for manual verification of the subject's identity and association in the data record with the iris images.

The wide interpupillary distance range accommodates all adults and young children, making it ideal for large scale, public authentication programs.

Very small size of design optimizes placement or mounting options.

Option within SDK to extend the depth of capture to 6.0 cm in recognition mode only for improved ease of use. Stand-off distance is 30 cm to 36 cm in Extended mode. Feature is backward compatible.

User Interface and Subject Instructions

Simplest and most repeatable subject interface available:

- Partially transparent mirror guides subject placement in X-Y dimensions
- Easy to use color LED's at center of mirror indicate correct placement of 32 to 35 cm in Z dimension.



move forward



move backward



stop / capture

The subject should be instructed to:

- Place the reflection of his / her eyes in the center of the mirror;
- Keep eyes open;
- Look at the colored LEDs and move his / her head toward or away from system according to the color;
- Stop when LED is green, and hold the position for about 1 second.

Please contact CMITech or your representative for more information on the CMIRIS Software Development Kit (SDK) that includes a **demo and evaluation** application.

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Technical Specifications

Dimensions	150 x 50 x 47 mm (5.9 x 1.9 x 1.8 inches)
Weight	230 grams (8.1 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) in Normal mode
Depth of field	30 mm (1.2 inches); option for 60 mm (2.4 inches) in recognition mode only
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 (about 50%); and 750 nm nominal (about 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
Power	Independent power supply required: 2.0 A at 5.0 V (supplied with system)
PC hardware and OS requirements	Intel® Atom™ or above processor Windows 7, 8, 8.1 (32 and 64 bit) Linux Ubuntu 12.04 distribution
Other certifications	CE, FCC, RoHS, WHQL

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