

Innovative face positioning feedback provides outstanding subject ease-of-use at a capture range of 35 to 45 cm.

Product Description:

The EF-45 next generation dual iris imaging system provides unprecedented subject ease of use through a highly innovative and intuitive user positioning approach. Subjects will view their own face in a front-facing, high resolution 5.0 inch color display to position themselves correctly within the real-time graphic interface. They will intuitively and naturally move to the correct position by simply centering and sizing their face image to the box within the display. In addition, the positioning box and the top border turn green to indicate proper distance positioning, after which the iris biometrics images are automatically collected, provided that the real time image quality metrics are satisfied. Vocalized commands give additional positioning guidance in real time.

In addition, this system features an expansive capture range of 35 to 45 cm in enrollment mode. Now, capturing highest quality iris biometrics images is fast, simple and fully intuitive for all subjects, including non-acclimated ones. For small scale access control or time & attendance applications, the capture range can optionally be extended to 30 to 45 cm in recognition mode, further increasing positioning flexibility and ease of use.

The system also captures high quality face images simultaneously with iris image capture. On board face recognition is standard



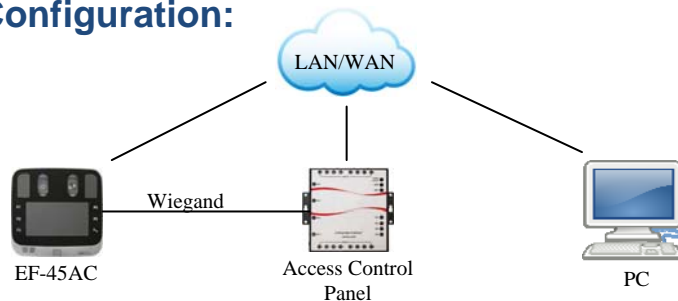
The EF-45 is an embedded system that includes its own ARM mainboard to manage all face and iris imaging processes. The normal external communication to host systems and clients is through TCP/IP via an Ethernet or optional Wi-Fi connection, but USB connectivity to a local PC host is available. The embedded architecture allows for on-board iris and face template generation and matching against a local data base.

The EF-45 is offered in two basic hardware configurations: the EF-45AC version is for physical access control (PACS), time & attendance and similar applications, and includes an embedded MiFare card reader plus a wall mount bracket and a full set of I/O connectors; the EF-45ID version is for general identity management applications, and does not include a built-in card reader.

Dimensions:

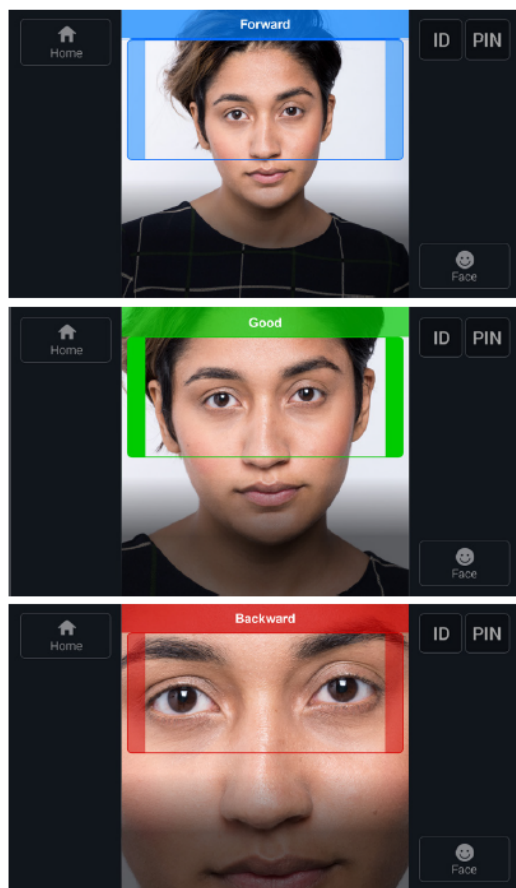


Typical Configuration:



Innovative, Intuitive Subject Positioning

The EF-45's face imaging sensor detects and displays the subject's face at up to 1.0 meter from the system on the high resolution color display. The subject will naturally move toward capture range of up to 45 cm by simply making his or her face fit the positioning "guide box", which is the capture or focal range of the system. Vocalized instructions also command the user to move forward or back to get into range. When in the proper range, the guide box and top border turn green, indicating to the subject to stop and wait until the image capture process is completed. Like a smart phone "selfie" image, this interface is highly intuitive, with typical capture times of less than 1.0 second from proper positioning.



Move Forward

Out of range
Too far away at more than 45 cm



Good

Within proper imaging range
Between 35 cm to 45 cm



Move Backward

Out of range
Too close at less than 35 cm

Dual Authentication Option:

The EF-45AC incorporates a proprietary MiFare reader for dual authentication. An external Wiegand reader can also be connected for the same purpose. When dual authentication is enabled, users are prompted to present a valid credential which is matched to their biometric template. If card/fob data matches the biometric template, the Wiegand data will be sent to the access control panel for further authentication.

Key Features:

Eye Localization:	Stereoscopic 3D Optimization for fast and reliable subject positioning	
Image Quality:	Meets or exceeds the ISO 19794-6 2011 and ISO/IEC 29794-6 iris imaging specifications	
User Instructions:	Colour coded guide box. Blue = Move Forward Red = Move Back Green = Correct Position	
Enrolment Distance:	35 to 45cm	
Operational Distance:	30 to 45cm ISO compatibility may require a shorter distance, which is adjustable.	
Real-time Image Quality Metrics:	1 - Subject Gaze Angle 3 - Focus	2 - Subject Motion 4 - Usable Iris Area (Occlusion)
Face Image Capture:	Face images are collected in synchronization with biometric iris images. Each data record consists of one face and two iris images. (Face data is not ISO)	
Wide Interpupillary distance:	Allows for use by adults and children, and is suitable for public authentication programs.	
Onboard Database:	Standard: 10,000 iris template pairs & 1,000 face templates Optional: 40,000 iris template pairs	
Matching Speed:	Approximately 1.0 second in 1:N mode	
Connections:	Plug-in connector kit for all cabling (except RJ-45 Ethernet) included in accessories package.	
Wi-Fi Option:	Field installable Wi-Fi dongle option for ease of networking installation.	
Card Reader Option:	Accepts input from any auxiliary Wiegand card reader.	

Specifications:

Onboard CPU:	ARM Cortex A9 Quad-core processor
Included Configuration Software:	Provides centralized (network) control and setup of system configuration, Wiegand settings, and IP address settings, as well as providing for centralized FW upgrades.
Dimensions:	166 x 166 x 43mm (6.5 x 6.5 x 1.7"), without mounting plate
Optional dual factor authentication:	Integrated Proprietary MiFare Smart card (EF-45AC only) and PIN options
External Connections: (EF-45AC version only)	Terminal and wired connectors for: Wiegand in/out, RS-232, RS-485, 2XTTL (GPIO) inputs, 1 dry relay contact.
Iris Image Resolution:	640 x 480 pixels, 8 bit depth. Supports multiple formats.
Adjustable FAR (false accept rate)	Iris algorithm threshold can be modified to adjust FAR to between 10^{-8} and 10^{-14}
Optional Fast Recognition:	Selectable for small scale applications.
Auto Camera Tilt:	Auto tilt of +25 to -20 degrees, which corresponds to an approximate height range of 40cm.
Iris Capture Time:	Usually about 0.5 seconds from time subjects' eyes are properly positioned.
IR Illuminating for Iris Imaging:	Dual wavelength LEDs (700-900nm). Meets IEC 62271 safety standard.
Face image capture:	Standard 24 bit colour and NIR, with onboard encoding and matching.
Audio:	24bit, 1.8W embedded speaker, line out connector for external speaker.
Operating Temperature:	0 to 45°C
Humidity:	10 to 90% RH, non-condensing
Network Connection:	10/100 Base-T Ethernet (RJ45 Connector)
Power supply requirements:	Adapter provided as standard with each system. Input 110 to 240VAC; output 12VDC @ 3A