

# CIBIO-IDENTITY

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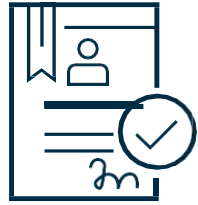
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# 01. Software definition

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CIBIO-IDENTITY is a software based on Artificial Intelligence (AI) for the registration and identification of workers.

## Functions:



**Users registration.** It allows you both to register and categorise them as employees and customers. Our software is capable of giving efficient results even with partial face occlusions, such as the use of glasses, scarves, hats... and does not permit the impersonation of users with photographs.



**Data storage.** It stores data registered in real time. We can access this data by an internal web through compatible and signed-in devices.



**Access control.** It registers employees clocking in and out, TTL output for lathes opening and restricted access according to privileges depending on the areas.



**Learning.** Based on AI, the software complements different neural networks to achieve an accurate and versatile result to different environments.



**Notifies.** Alarms can be configured so that they will be notified through web service to tablets, smartwatches and/or other devices. For instance, the access to restricted areas or the entry in determined times.

## Features:

- ✓ Cutting-edge technology
- ✓ Up to 150.000 people can register with a duration of identification less than 0.5 seconds.
- ✓ Integration with other access control systems.
- ✓ PDF exportable alarms and registers.





## 03. Software analytics

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CIBIO-IDENTITY is a software based on Artificial Intelligence for the registration and identification of workers.

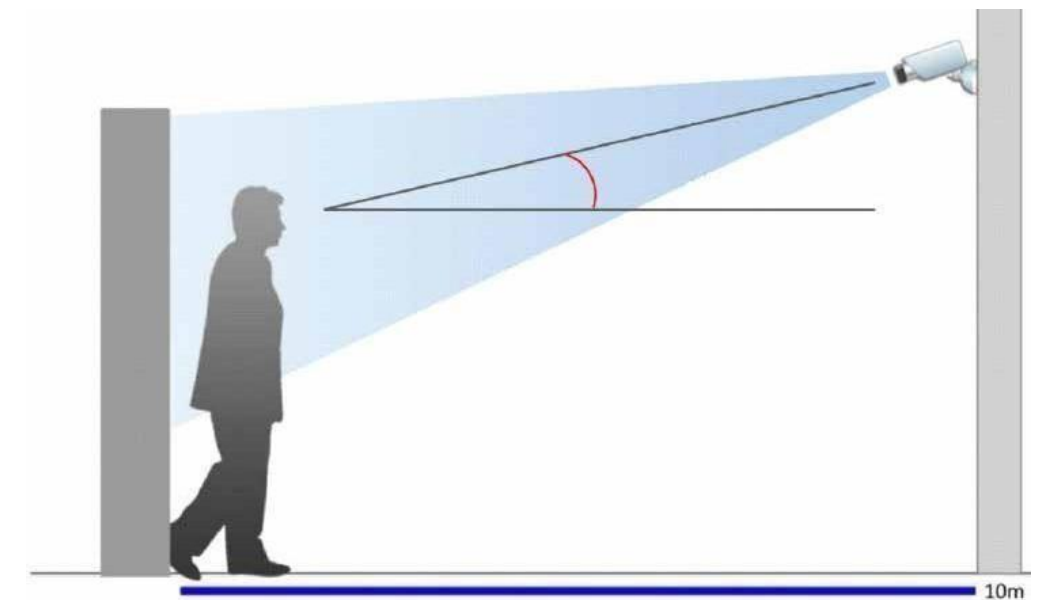
Functioning:

- Detection process. It focuses on the user's facial image in order to identify it through a photographic or video camera.
- Pre-processing of images. Biometric information (as facial alignment with respect to certain geometric properties) extraction.
- Facial features extraction. Biometric information of facial traits is stored establishing a facial biometric pattern.
- Comparison process. It collates the biometric information obtained with what was previously stored in the database, by a 1:N comparison. Acquired results indicate the similarity percentage of the user to identify with the ones stored in the database.
- Decision-making process. The access is allowed to the individual once he/she gets identified and the similarity percentage obtained is above certain threshold.
- Comparison process with DB recordings.

Operating conditions:

- Normal lighting conditions, not extreme, uniform illumination.
- With background illumination, it is recommended a camera with Wide Dynamic Range/ Background light compensation function.
- Users walking at a normal speed.
- Cameras pointing the face in an angle with a maximum vertical deviation of 15 degrees. (Fig. 1).
- Height position of the camera (Fig. 2).
- Faces in front position: (Fig. 3).
  - +/- 30 degrees deviation up/down.
  - +/- 35 degrees deviation left/right.
- High quality images, at least 720p.

Fig.1



# 03. Software analytics

- Minimum face size for the register: 120x120px or 60pixels between the eyes. (Fig. 4).
- Face size recommended for the register: 120x120px or 60 pixels between the eyes.
- Minimum face size for the recognition: 50x50px or 25 pixels between the eyes (Fig.4). In terms of camera resolution would be 416 pixels per meter.
- Face size recommended for the recognition: 100x100px or 50 píxeles between the eyes. In terms of camera resolution would be 833 pixels per meter.
- Permanent internet connection for online licenses.

Fig.2

[Camera distance / Must-pass area (in meters)]	[Security camera recommended height (in meters)]
1	1,97
1,5	2,10
2	2,24
2,5	2,37
3	2,50
3,5	2,64
4	2,77
4,5	2,91
5	3,04
5,5	3,17
6	3,31
6,5	3,44
7	3,58
7,5	3,71
8	3,84
8,5	3,98
9	4,11
9,5	4,25
10	4,38

Fig.3

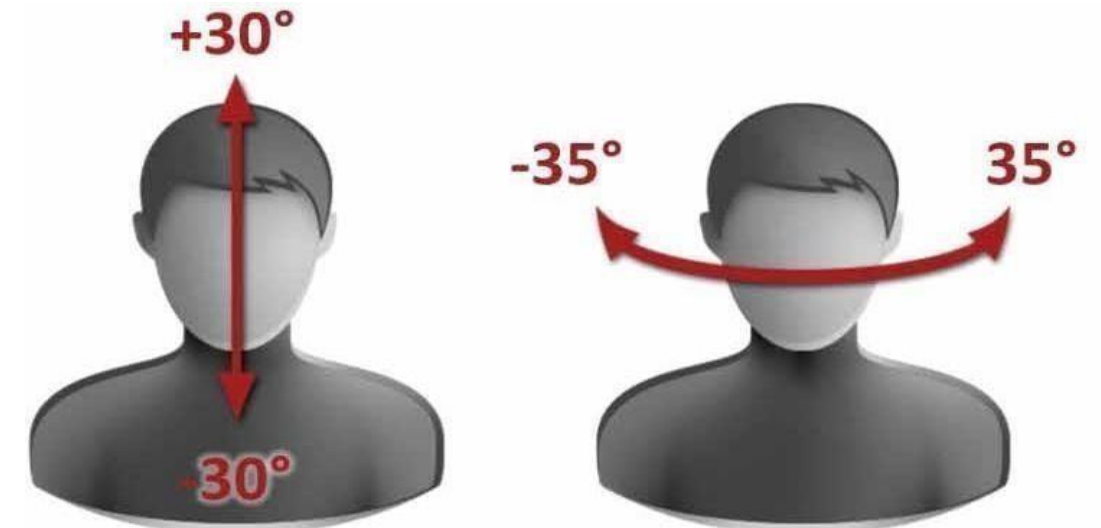
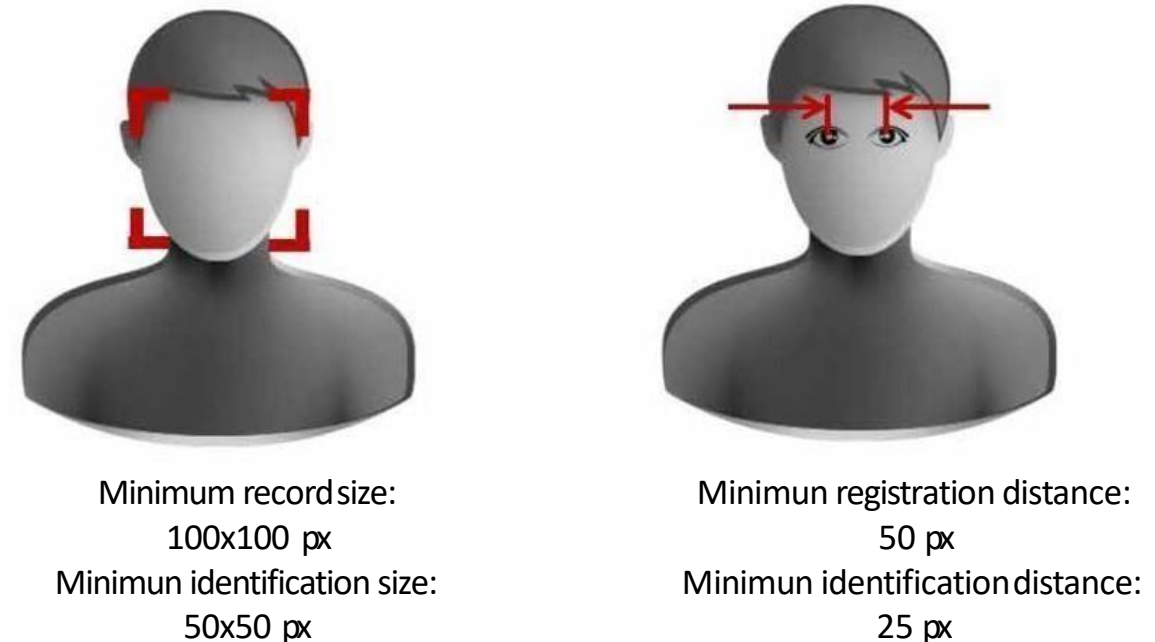


Fig.4





# 04. Interface customisation

CIBIO-IDENTITY Can be customised as the company pleases.

Versions:

**Basic.** The logo of the company is incorporated and can gradate the corporate colours of it. You can see below how would it look.



**Intermediate.** The logo of the company is incorporated, as well as some background design. An example is displayed below.



**High.** The interface is designed to the company's taste, being the company the one who decides what style to put. We show an example of a fully customised customisation.



## 05. Minimum requirements

For the optimal functioning of **CIBIO-IDENTITY**, the following components are required:

1 Camera (1080)	CPU: i5 8400 RAM: 8GBDDR4 GPU: GTX1070
2 Cameras (1080)	CPU: i5 8400 RAM: 16GBDDR4 GPU: RTX2060

3 Cameras(1080)	CPU: i7 8700 RAM: 16GB DDR4 GPU: RTX 2060 Super
4 Cameras (1080)	CPU: i7 8700 RAM: 16GBDDR4 GPU: RTX2070







**CIBINAR**

Ciberseguridad e Inteligencia Artificial