

MODIVISION

MODIVision is one of the leading companies offering biometric systems and identity verification methods for commercial and governmental applications. With the aspiration to achieve the highest passenger flow and to avoid long queues, wasting time or long walking distance, MODIVision has invented facial recognition "on the move". This means that the system will record, check, and match the person directly so that it is not necessary for the person to stop. The person can easily pass the control check. The "Deep Learning Biometric Algorithm" identifies people in a database of thousands of people within one hundred milliseconds.

The biometrical check is fully automated so that the person does not need to care about any instructions. This feature speeds up and increases the efficiency of the user's movement with the highest security level checks.

The product family covers a wide area of different applications including ID document and Covid pass checks in combination with face image verification:

- Online and offline identification of black-listed people
- Access control based on facial recognition in motion
- ID card verification at self-service kiosks and speed gates
- Covid pass check at self-service kiosks and speed gates

MODIVISION CONCEPT

ModiVision has invented a one camera system as a solution for image acquisition with simple and friendly software interface for enrollment, identification and authentication processes. This one camera solution covers the widest height range in the market. That solution eliminates any mechanical movement

and maintenance, although it increases the process throughput.

This camera detects the right person's face without any confusion, then captures a high-quality image that guarantee high verification and identification accuracy. The software instantly requests and verifies the live images against biometric photos stored in a database matching server or locally against the extracted image from an ID document without storing any data. The products for capturing, comparing, and verifying are developed against any frauds. The system differentiates between human faces and artifacts such as printed images, digital images and videos, and masks.

This technology is not only developed for airport security, but also for stadiums, banks, casinos, hotels, smart cities, leisure parks, and individual companies. This technology or system gives the possibility to increase security and avoid queues.

ModiVision solutions exist and operate in more than twenty countries, accelerating throughput, reducing costs, and eliminating paper-based verification processes.

MODIVISION HARDWARE & SOFTWARE ADVANTAGES

- Face recognition on the move.
- A selectable 3D control capturing area to choose a specific screening area for data protection. This means that the system will only capture the person inside the screening area, and if anyone is passing outside this area will not be captured.
- 3. ModiVision camera technology has innovative camera features that guarantee only the first person in the queue will be chosen. This can be done at a minimum distance of 0.3m which will decrease the walking distance for the user, short queues, less time, and more empty space.
- 4. Flexible design that can be added to existing or new Kiosks and entrance gates.
- 5. The one camera unit requires no maintenance.
- 6. Widest height range in market with one camera.
- 7. ModiVision products are wheelchair compatible.

- 8. Wiegand interface
- Digital input to connect the camera unit directly with external motion sensors.
- 10. Digital output to connect the camera unit directly to the entrance gate doors. The camera unit sends signals to control the doors movement.
- 11. Monitor shows live image of the person and displays user transaction.
- 12. Significantly faster passenger processing.
- 13. Uncompromised fast matching and searching results with low false acceptance rates (FAR) and false rejection rates (FRR)
- 14. High usability, easy to integrate, unique security, and the operating system is available in multiple languages.
- 15. The used algorithm is ranked within the top five on NIST.



FACEEYE

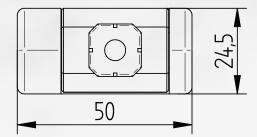
HOUSING

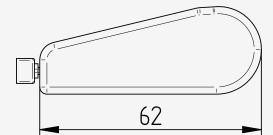
Material ABS plus Weight 0,1 kg

ENVIRONMENTAL

Operating temperature 0°C to 45° C (32°F to 113°F).
Operating humidity 0-80% non-condensing.
Storage temperature 0°C to 80°C (-22°F to 176°F).
Storage humidity 0-80% non-condensing.

Protection IP 6





POWER AND CONNECTION

1 x USB 3.1 Type C High speed/ Data and power

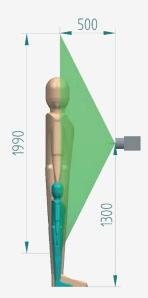
CAMERA

13 MP with selectable area adjustment of brightness and image sharpness

CERTIFICATIONS

CE, ICAO compliant, NIEM- conformant.

FaceEye was designed for demo, POC, mobile applications.









FACETUBE

HOUSING

Material ABS plus, Aluminium

Weight 0,55 kg

ENVIRONMENTAL

Operating temperature 0°C to 45° C (32°F to 113°F).
Operating humidity 0-80% non-condensing.
Storage temperature 0°C to 80°C (-22°F to 176°F).
Storage humidity 0-80% non-condensing.

Protection IP 6

POWER AND CONNECTION

2 x USB 3.1 Type C High speed/ Data and Power

2 x digital in Opto Isolation 12 V - 30 V

2 x Relays out 30 W

Wiegand

I₂C

CAMERA

13 MP with selectable area adjustment of brightness and image sharpness

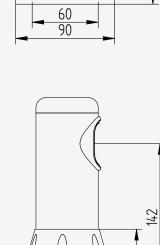
CERTIFICATIONS

CE, ICAO compliant, NIEM- conformant.

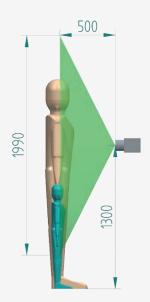
FaceTube was designed for gates.

Where you can easily integrate it on any gate.

The FaceTube has DI/DO to control the gate's door, but has no screen.



187









FACEBAR MINI

HOUSING

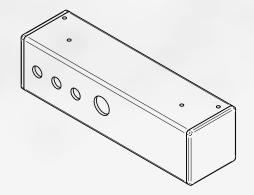
Material Paint coated steel. ABS plus

Weight 0,45 kg

ENVIRONMENTAL

Operating temperature 0°C to 45° C (32°F to 113°F)
Operating humidity 0-80% non-condensing.
Storage temperature 0°C to 80°C (-22°F to 176°F).
Storage humidity 0-80% non-condensing.

Protection IP 6



POWER AND CONNECTION

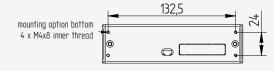
2 x USB 3.1 Type C High speed/ Data and Power

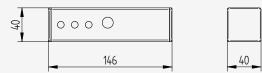
2 x digital in Opto Isolation 12 V - 30 V

2 x Relays out 30 W

Wiegand

I2C





CAMERA

13 MP with selectable area adjustment of brightness and image sharpness

ILLUMINATION

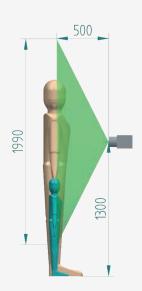
RGB LED strip

mounting option top 4 x M4x8 inner thread 6 18,5 97 132,5 7,5

CERTIFICATIONS

CE, ICAO compliant, NIEM- conformant.

FaceBar Mini was designed to work vertically and horizontally. Where you can easily integrate it inside kiosks, totems and baggage drop off system.









FACESCREEN V2

HOUSING

Material ABS plus Weight 1.3 kg

ENVIRONMENTAL

Operating temperature 0°C to 45° C (32°F to 113°F).
Operating humidity 0-80% non-condensing.
Storage temperature 0°C to 80°C (-22°F to 176°F).
Storage humidity 0-80% non-condensing.

Protection IP 6

POWER AND CONNECTION

2 x USB 3.1 Type C High speed/ Data and Power

1 x HDMI

10.1" Touchscreen

2 x digital in Opto Isolation 12 V - 30 V

2 x Relays out 30 W

Wiegand

I₂C

CAMERA

13 MP with selectable area adjustment of brightness and image sharpness

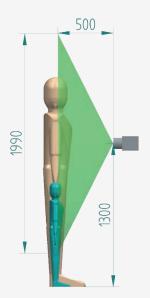
CERTIFICATIONS

CE, ICAO compliant, NIEM- conformant.

FaceScreen V2 was designed for gates.

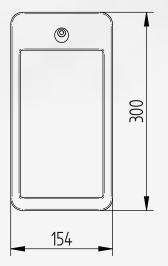
Where you can easily integrate it on any gate.

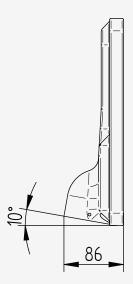
The FaceTube has DI/DO to control the gate's door and 10.1" touch screen.













SMART FACESCREEN V2

HOUSING

Material ABS plus Weight 2.6 kg

ENVIRONMENTAL

Operating temperature 0°C to 45° C (32°F to 113°F).
Operating humidity 0-80% non-condensing.
Storage temperature 0°C to 80°C (-22°F to 176°F).
Storage humidity 0-80% non-condensing.

Protection IP 6



10.1" Touchscreen

Power Supply (included) 19 V 90 W

2 x digital in Opto Isolation 12 V - 30 V

2 x Relays out 30 W

Wiegand

I₂C

Integrated Biocontrol Client *for configuration check page 19

CAMERA

13 MP with selectable area adjustment of brightness and image sharpness

ARCHITECTURE

CPU Intel Core is

RAM 8 GB DDR4-RAM

HDD 250 GB SSD

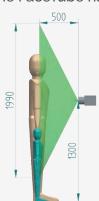
Minimum requirements *see also comment on page 19

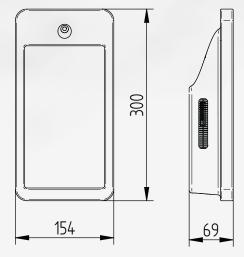
CERTIFICATIONS

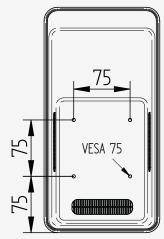
CE, ICAO compliant, NIEM- conformant.

Smart FaceScreen V2 was designed as a standalone product. Where you can easily fix it on a wall or entrance.

The FaceTube has vesa fixation and 10.1" touchscreen.













FACEBRIDGE V2

HOUSING

Material ABS plus Aluminium

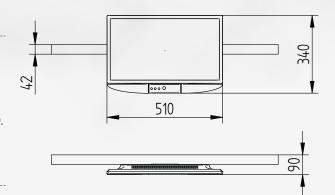
Weight 6,5 kg

ENVIRONMENTAL

Operating temperature 0°C to 45°C (32°F to 113°F).
Operating humidity 0-80% non-condensing.
Storage temperature 0°C to 80°C (-22°F to 176°F).

Storage humidity 0-80% non-condensing.

Protection IP 6



POWER AND CONNECTION

2 x USB 3.1 Type C High speed/Data and Power

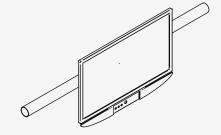
1 x 230 V 40 W

2 x digital in Opto Isolation 12 V - 30 V

2 x Relays out 30 W

Wiegand

I₂C



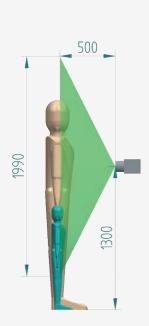
CAMERA

13 MP with selectable area adjustment of brightness and image sharpness

CERTIFICATIONS

CE, ICAO compliant, NIEM- conformant.

FaceBridge V2 was designed for fast gate access on the move.



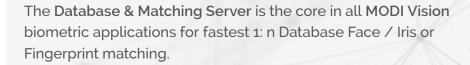


BIOCONTROL CLIENT AND DATABASE & MATCHING SERVER

MODI Vision High-End Mini Computer for connecting the camera and sensor elements, as well as the pre-processing of the captured images.

The BioControl Client is connected to the Database & Matching Server through an external network, and to the camera unit through an internal network.

Based on state-of-the-art technology and in combination with MODI's unique software systems, the BioControl Client achieves outstanding performance while working quietly and efficiently. Provides fast matching time and enables face recognition on the move.



The MODI Database & Matching Server is one of the key components responsible for the high speed of MODI biometrics products. Up to 200 clients can be connected to a single server via network.

Nevertheless, the server can serve any client within about 200 milliseconds. On the server, both the Microsoft SQL Express database and the matching algorithm are preinstalled and included in the price.





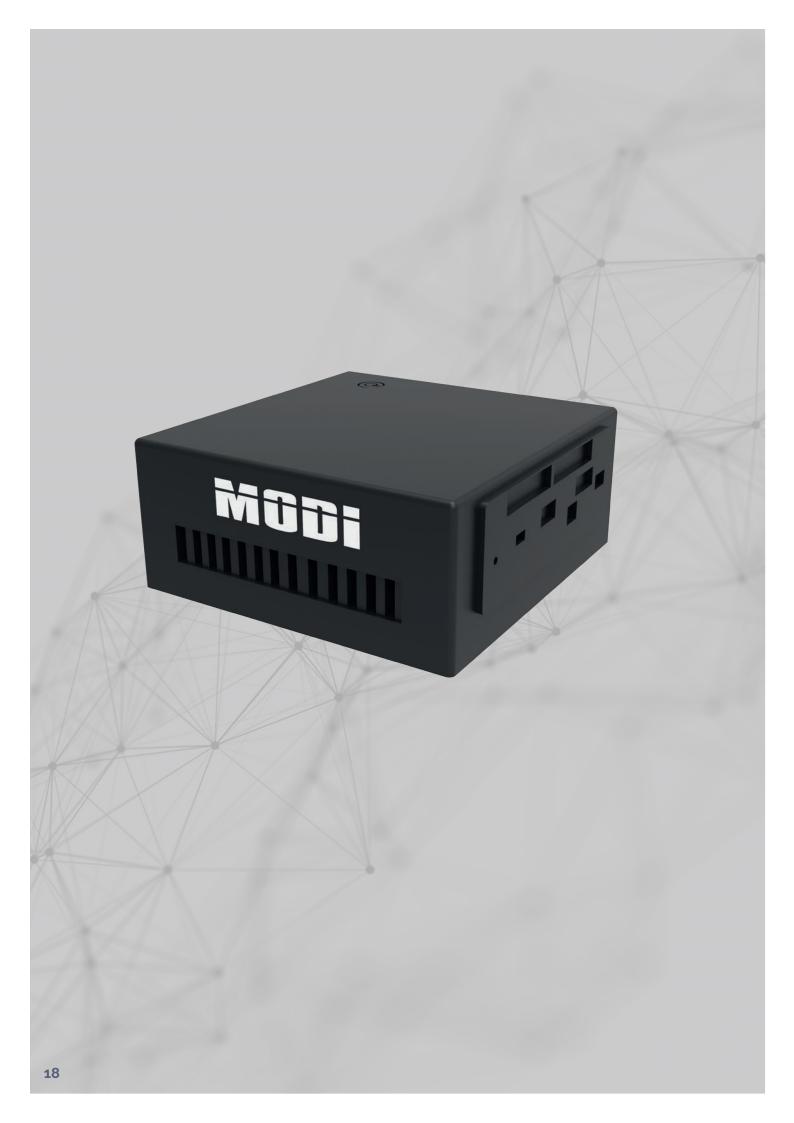
FEATURES AND ADVANTAGES OF THE BIOCONTROL CLIENT AND DATABASE & MATCHING SERVER

FEATURES OF THE BIOCONTROL CLIENT:

- 1. Pre-processing of the recorded images.
- 2. Can be connected to any monitor to show live images of the person and displays user transaction.
- 3. Simple design and small size that can be integrated with any existing or new Kiosks or entrance-gates.
- 4. User-friendly interface for fast and simple integration.

FEATURES AND ADVANTAGES OF THE DATABASE & MATCHING SERVER TOGETHER WITH MODI SOFTWARE:

- 1. Processing of the recorded images.
- 2. User-friendly interface for fast and simple integration. Face recognition on the move.
- 3. Significantly faster image processing because of graphics processing unit (GPU).
- 4. High usability, easy to integrate, unique security, available in multiple languages.



BIOCONTROL CLIENT

Minimum Requirements:

Processor Intel Core i5

Graphics Intel® UHD Graphics

System Memory 2 x 8 GB DDR4

Storage 250 GB SSD

Peripheral Connectivity Intel Gigabit LAN

Thunderbolt 3 Port

4 x Super Hi-Speed USB 3.0

Intel Dual Band Wireless-AC 8265 (802.11ac)

Dual Mode Bluetooth

Mechanical Size (L x W x H) 117 x 112 x 38 (mm)

Operating system Windows 10





DATABASE & MATCHING SERVER

Example (the Server is configurable based on the project)

Processor Intel Core i7-7700, 4 x 3.60GHz

Graphics NVIDIA GeForce GTX 1060 (6GB)

6 GB GDDR5

1 x DVI

1 x HDMI 2.0b

3 x DisplayPort 1.4

System Memory 16GB DDR4 (2 x 8GB, 2 Slots)

Storage 1TB HDD + 256 GB SSD (SATA) DVD+/-RW DL

Peripheral Connectivity 1 x USB-C 3.0

3 x USB-A 3.0 2 x USB-A 2.0 1 x Gb LAN 7in1 Card reader

3 x Jack plug

WLAN 802.11a/b/g/n/ac

Bluetooth 4.2

Mechanical Size 35.4 cm x 16.4 cm x 36.3 cm

Operating system Windows 10 professional 64 bit

Database SQL Express

License Biometric Face Server license

One Client connection license



DATABASE & MATCHING SERVER

The biometric Database & Matching Server are the core in all MODI Vision biometric applications for fastest 1:n Database Face matching. Up to 200 clients can be connected to a single server via network. Nevertheless, the server can serve any client within about 200 milliseconds.

BIOCONTROL CLIENT

The BioControl Client is a High-End Mini Computer for connecting the camera and sensor elements, as well as the pre- processing of the captured images. The BioControl Client is externally connected to the server network, and internally connected to the camera unit and entrance gate or kiosk network. In case of 1:N. In case of 1:1 local identification, the BioControl Client is able to work in a standalone mode.

CAMERA UNIT

MODI Vision invented a one camera system for image acquisition with simple and friendly software interface for verification and identification processes. FaceBar Mini, FaceEye, FaceTube FaceScreen and FaceBridge system are made for image acquisition with capturing module for short, medium, and long distance with scalable and efficient software interface for biometrical face finding and capturing processes. FaceBar Mini, FaceEye, FaceTube FaceScreen and FaceBridge operating software instantly requests and verifies the live images against biometric photos.

ENTRANCE GATES AND KIOSKS

MODI Vision Totem is one of the first fully automated kiosks. MODI Kiosks use 3D sensor high resolution camera technology combined with a precisely clear field of view for the client face. The cutting- edge camera guarantees only the first person in the queue or the nearest one at a time can pass the MODI Kiosk by providing highly secure facial recognition. As a result, any operating staff or supervising nearby becomes unnecessary.

MODI Vision offers the customer to select a biometric kiosk equipped exclusively with face recognition. However, the kiosk is also available with an integrated RFID, or fingerprint identification, system. The MODI Gate features a 1:1 or multipurpose 1:n (one - many) face recognition/fingerprint identification, face recognition/RFID, or face recognition/fingerprint/RFID.

Both systems are available upon request in a combined version allowing for the fastest possible single client or user processing. Thereby, client or user processing is not only made far more secure but also, convenient, faster, and less labor-intensive.

THE MODI DEVICE AND SOFTWARE ARCHITECTURE

