



# bcB FaceScan<sup>®</sup>

Powered by **bcB** Monitor 4.0<sup>®</sup>



## Detection of elevated body temperature

*Infrared thermography has demonstrated to be an effective containment tool against the spread of diseases of viral origin.*

*Since the first pandemic of this millennium caused by a coronavirus, the SARS in 2003, infrared thermography has demonstrated its effectiveness as a containment measure to carry out a first rapid screening of possible infected persons, detecting cases quickly, accurately and without contact, of elevated body temperature (EBT - Elevated Body Temperature), the most visible symptom of an infection.*

*Thermal imaging cameras have subsequently been used in other epidemic or pandemic outbreaks such as (in chronological order): avian influenza, swine influenza, MERS, Ebola, and COVID-19.*

*It is a fast, simple, non-contact (non-invasive) and reliable method, if the correct cameras and software are used.*

Using infrared thermography it is possible to obtain a thermal map of the skin, quickly (in real time).

Coupled with suitable software, such as the **bcB** FaceScan, with functions such as the generation of visual and / or audible alarms if a previously set temperature threshold is exceeded, and the storage of radiometric images for subsequent traceability and analysis, this technology allows rapid screening of large groups of individuals, facilitating detection,

and, if applicable, the isolation of persons suspected of having contracted a viral infection, so that they can later be evaluated and diagnosed with greater precision by qualified health personnel.

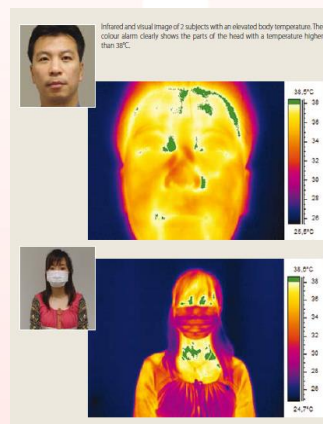
This makes infrared thermography a useful ally against the spread of possible infections, in points of high traffic of people such as airports, ports, railway or bus stations, shopping centers, entrances to large companies, or entrances to large hospitals, among others.



The FLIR ELARA FR-345-EST camera is a low cost solution for the correct detection of elevated body temperature.



Example of facial temperature measurement using a thermal imager.



Thermal image of the facial and body temperature of two people (courtesy of FLIR Systems).

Minimum characteristics that a thermal imaging camera must comply for a correct measurement of body temperature

The usual thermal imaging cameras in industrial applications are not suitable for this application. The ISO / TR 13154: 2017 standard indicates the requirements that these types of cameras must meet. Our cameras have the following characteristics:

- Minimum resolution 320x240 pixels, to be able to measure the temperature in the inner edge of the eye correctly.
- Screening function, which excludes peaks and fluctuations to obtain the required measurement precision, incorporated in the camera itself through calibration or firmware, or provided externally through software.
- Thermal sensitivity of 30 mK (42° lens) or 40 mK (24° lens).
- Spatial resolution that allows monitoring from 1.5m to 3.0m, depending on the chosen camera.

FLIR cameras models suitable for this application

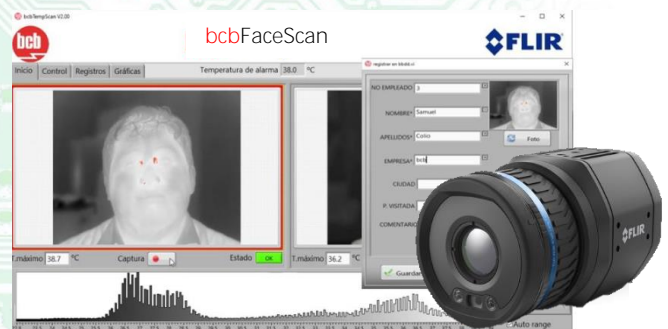
- FLIR Elara FR-345-EST, is the most affordable and sufficient equipment for a correct measurement with auxiliary interface.
- FLIR A500-EST, while integrating a simpler measurement interface, has the highest precision calibration.
- FLIR A400, together with the bcbFaceScan software, is the fastest, most intuitive and efficient thermographic system for detecting elevated body temperature.



A500-EST camera connected directly to monitor display (courtesy of FLIR Systems)

## Software

The bcbFaceScan, together with the FLIR A400 camera, is the most complete and accurate solution for detecting elevated body temperature, and in its MultiCam version it also offers the possibility of simultaneously viewing several cameras in real time. It allows the generation of ROIs (Regions of Interest) and alarms, as well as the visualization, in real time, of the temperature histogram, and the evolution of the temperature values over time.



bcbFaceScan: Temperature data acquisition software from one or more thermal imaging cameras. Together with the FLIR A400 camera, it is the most complete solution for detection of elevated body temperature.

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