Thermal Imaging & Body Temperature
Thermal Imaging is the process to create an image using Infrared Radiation.

Most things emit some form of Infrared Radiation, including humans and animals. Infrared Radiation is directly affected by temperature, e.g. the higher the temperature the more Infrared Radiation is emitted, and the inverse is also true.

Using a Microbolometer, a thermal camera is capable of generating a Thermal Image by applying a colour palette to the different intensities of Infrared Radiation.
Body Temperature refers to the temperature of the body’s core where your internal organs and bodily systems function at an optimal level.

Body Temperature tends to maintain a constant temperature and is not as easily affected by variables from the environment such as temperature, relative humidity, wind velocity, and radiation.

Normal Body Temperature tends to be 36.5–37.5 °C (97.7–99.5 °F).
Skin Temperature Explained

Skin temperature refers to the temperature of the body skin which is the largest organ in the human body.

Skin Temperature can vary between 33.5 and 36.9 °C (92.3 and 98.4°F)

Skin Temperature tends to be affected by environmental factors more easily than body temperature as it is the outermost area of the body.

When reading skin temperature it is important to take in environmental variables such as temperature, relative humidity, wind velocity, and radiation.

In outdoor environments it is important to consider solar loading, as this also has an impact on temperature readings.
Skin Offset (Correction)
The software settings used to estimate this difference is called skin offset.

- The difference between facial skin temperature and internal core temperature depends on many factors, however in many cases it depends primarily on the ambient air temperature to which subjects have most recently been exposed. Higher ambient temperatures result in higher facial skin temperature that is closer to internal core temperature. Lower ambient temperatures result in lower facial skin temperature.
Coronaviruses are a large family of viruses which may cause illness in animals or humans. In humans, several coronaviruses are known to cause respiratory infections ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). The most recently discovered coronavirus causes coronavirus disease COVID-19.

COVID-19 is the infectious disease caused by the most recently discovered coronavirus. This new virus and disease were unknown before the outbreak began in Wuhan, China, in December 2019.
World Health Organisation (WHO) Explains Coronavirus

Direct Link: https://youtu.be/mOV1aBVYKGA
Symptoms of the Coronavirus | COVID-19

- Fever
- Fatigue
- Sneezing
- Runny nose
- Sore throat
- Dry cough
- Shortness of breath
- Decreased white blood cells
How does Coronavirus | Covid-19 Spread?

- People can catch COVID-19 from others who have the virus. The disease can spread from person to person through small droplets from the nose or mouth which are spread when a person with COVID-19 coughs or exhales. These droplets land on objects and surfaces around the person. Other people then catch COVID-19 by touching these objects or surfaces, then touching their eyes, nose or mouth. People can also catch COVID-19 if they breathe in droplets from a person with COVID-19 who coughs out or exhales droplets. This is why it is important to stay more than 1 meter (3 feet) away from a person who is sick.

**Important Note about the Incubation Period**

- The “incubation period” means the time between catching the virus and beginning to have symptoms of the disease. Most estimates of the incubation period for COVID-19 range from 1-14 days, most commonly around five days.
Recommendations to prevent spread of infection

- Standard recommendations to prevent infection spread include:
  - regular hand washing,
  - covering mouth and nose when coughing and sneezing,
  - avoid close contact with anyone showing symptoms of respiratory illness such as cough or sneezing
  - avoid visiting wet or live markets and contact with animals, excretions and droppings
  - thoroughly cooking meat and eggs.
- If you are unwell on return from travel to an affected area, contact your healthcare provider and tell them of recent travel.
Thermal scanners are effective in detecting people who have developed a fever (i.e. have a higher than normal body temperature) because of infection with the new coronavirus.

However, they cannot detect people who are infected but are not yet sick with fever. This is because it takes between 2 and 10 days before people who are infected become sick and develop a fever.

#2019nCoV
Key Benefits of using Thermal Imaging Cameras for Fever Screening

- Non-invasive
- No Human Contact is required to use a thermal camera for fever screening
- Large number of people can be screened at one time
- Prevents delays in screening a number of people in areas such as airports, schools, offices and seaports
SATIR Thermal Imaging Solutions for Fever Screening

CK350-F Complete Fever Screening System

The CK350-F is a complete system that comes with a thermal camera, black body, software and wall brackets.

Key Features Include:

- 384x288 IR detector
- Temperature Range -20°C ~ 60°C
- Temperature Accuracy ≤0.3°C
- Facial Recognition
- Software App Available on Apple and Google Products
SATIR Thermal Imaging Solutions for Fever Screening

CK350-F Complete Fever Screening System

Direct Link [https://youtu.be/K7kHMHzFDm8](https://youtu.be/K7kHMHzFDm8)
Thank You for Your Interest

Visit us at

Website
https://satir.com/

YouTube Channel
https://www.youtube.com/user/satiruk ltd

Facebook
https://www.facebook.com/SATIREurope

LinkedIn
https://www.linkedin.com/company/satir-europe/

Instagram
https://www.instagram.com/europesatir/

Twitter
https://twitter.com/SatirEurope