



Bosch launches new Human Skin Temperature Detection solution

Enabling businesses to safeguard public health and continue operating amid pandemic

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- ▶ Contactless solution can scan people for elevated skin temperature within a range of 2.5 to 4.5 meters (8 to 14 feet).
- ▶ The camera's thermal module is highly precise and has a radiometric accuracy of +/- 0.5 °C / 0.9 °F, tested by an independent third-party lab.
- ▶ Facilitates single-person stop-and-stand temperature screening in office buildings, manufacturing plants, and airports.
- ▶ Built-in Artificial Intelligence (AI) and smart profiles filter possible anomalies caused by environmental conditions, like air temperature, and known false triggers to ensure high accuracy.
- ▶ Trusted solution that officially follows Food and Drug Administration (FDA) guidelines and offers General Data Protection Regulation (GDPR) compliant self-service mode.

Grasbrunn – Bosch has launched a human skin temperature detection solution that features built-in Artificial Intelligence (AI). The intelligent solution assists businesses to react to and predict possible unwanted situations. Data from the “Human Skin Temperature Detection solution” from Bosch provides actionable insights that can minimize illness spread by accurately identifying people with elevated skin temperature at checkpoints in office buildings, manufacturing plants, and airports.

During a crisis such as the COVID-19 pandemic, businesses need to stay open to serve customers, generate revenue, pay employee salaries, and contribute to the economy while keeping people safe. The new Human Skin Temperature Detection solution from Bosch is a contactless screening tool that can scan employees, customers, visitors, and contractors for elevated skin temperature. By leveraging critical data, business owners and security operators can take the right predictive measures to safeguard people's health.

Since 2016, Bosch has offered Intelligent Video Analytics, a form of AI, as standard in all video security cameras it brings to the market. This data-driven approach, coupled with its ability to build high-quality hardware platforms, has enabled Bosch to swiftly develop a solution that detects elevated skin temperatures and offers businesses an option to reduce disruption as the coronavirus pandemic persists.

Trusted solution that facilitates single-person stop-and-stand temperature screening

The camera's thermal module is highly precise and has a radiometric accuracy of $\pm 0.5\text{ }^{\circ}\text{C} / 0.9\text{ }^{\circ}\text{F}$. Herewith the Human Skin Temperature Detection solution is among the devices that officially comply with the stringent norms of the FDA's April 2020 Emergency Use Authorization (EUA) Enforcement Policy for Telethermographic Systems guidelines and has been tested by an independent third-party lab for accuracy, stability, and drift per International Electrotechnical Commission IEC80601-2-59:2017 test setup. The solution provides a contactless measurement within a range of 2.5 to 4.5 meters (8 to 14 feet). It also contributes to the overall needed awareness to maintain proper physical distancing in areas where people must pass through a checkpoint, such as in airports, commercial buildings, or manufacturing plants.

The Bosch Human Skin Temperature Detection solution is offered as a kit that contains a DINION IP thermal 9000 RM camera combined with a smart VIDEOJET decoder 7000 that also acts as a direct monitor output, a temperature reference device (blackbody), a special control keyboard, and specific software that helps to detect anomalies in human skin temperature.

The camera's built-in AI or Intelligent Video Analytics detects faces in the field of view, and the decoder's embedded thermal algorithm will locate the hotspots on the face. For reliable screening, individuals need to face the camera, remove glasses, hats, and other head and face coverings, and remain still. The solution will quickly detect multiple facial hotspots and indicate if an individual has an elevated skin temperature. The system has an intuitive interface allowing operators to access temperature alarms, temperature histograms, quick snapshot replay, and alarm threshold configurations via a USB keyboard, without the need for an additional computer or software.

Safeguarding people's health involves processing sensitive data; therefore, the Human Skin Temperature Detection solution from Bosch offers a special GDPR compliant public self-service mode. This self-service mode will cover the person's face and hide the screen's absolute temperature data. By default, the decoder

will automatically erase stored historical data after four hours to ensure the latest data is used for reference and sensitive data is not unnecessarily kept.

Built-in AI and three smart profiles help to ensure high accuracy in varying applications

Depending on the application, operators can choose from three unique alarm profiles – absolute, relative, or automatic alarm thresholds – to achieve high screening accuracy. In a controlled environment, such as inside a building, operators can use the absolute alarm threshold. This profile measures the absolute skin temperature of the hottest spots on the face and triggers an alert when the preconfigured threshold is reached or exceeded. When skin temperature may vary due to environmental conditions, like air temperature, operators can apply the relative alarm threshold. With this profile, the alarm temperature threshold setup is based on the average temperature of multiple persons plus x degree °C / F. For applications that need to scan large numbers of people daily, operators can choose the automatic alarm threshold. This profile provides an alarm whenever the skin temperature is within a configurable fraction (alarm ratio) of the hottest previously observed values. The alarm threshold is automatically based on the rolling average of the population previously observed. All profiles offer either manual or automatic face detection.

The solution's built-in AI not only enables the detection of faces of which it measures the hottest spot. It also filters possible false triggers caused by heat sources, like a cup of coffee. The system continuously monitors all temperature data (both historical and current). If there are too many deviations, a new threshold is estimated so that an operator can update system settings accordingly.

The new Bosch Human Skin Temperature Detection solution provides a trusted, accurate tool that leverages critical data, so business owners and security operators can take the right predictive measures to safeguard people's health and help businesses stay open.

For more information please visit:

<https://www.boschsecurity.com/xc/en/solutions/video-systems/solutions/human-skin-temperature-detection-solution/>

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Bosch at CES 2021:

- **VIRTUAL PRESS CONFERENCE: Monday, January 11, 2021**, from 8:00 to 8:30 EST (14:00–14:30 CET) with Dr. Michael Bolle, Bosch CTO, CDO, and management board member, and Mike Mansuetti, president of Bosch North America, at the [Bosch Media Service](#).
- **VIRTUAL BOOTH: January 12 – February 15, 2021**, at www.ces.tech
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- **DEEP-DIVE SESSIONS WITH BOSCH-EXPERTS: January 12 – February 15, 2021**, at www.ces.tech
 - *Sustainable #LikeABosch: How a key global industry player drives carbon neutrality at its sites* with **Torsten Kallweit**, Head of Corporate Office Health, Safety, Environmental and Fire Protection as well as Sustainability and Manager CTO Bosch Climate Solutions GmbH, and **Annette Wagner**, Head of Sustainability and Ideas Lab
 - *Move #LikeABosch: Technology for sustainable future mobility* with **Mike Mansuetti**, President of Bosch North America, and **Tim Frasier**, Regional President Automotive Electronics North America
 - *Artificial intelligence in use: Application examples from the fields of fitness tracking and well-being to smart cameras* with **Kaustubh Gandhi**, Senior Product Manager, and **Sina Isabell Springer**, Business Development Manager
 - *Perfectly keyless advanced* with **Tim Frasier**, Regional President Automotive Electronics North America, **Daniel Kornek**, Head of Product Area Vehicle Access (Perfectly Keyless), and **Jia Hou**, Business Development Manager

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Additional information is available online at <http://www.boschbuildingtechnologies.com>

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