White Paper

Temperature Measurement Platform
IR Thermal Scanning Solutions

Driving Next-Gen Temperature Monitoring

Gamma Solution's TITANUS Body Temperature Measurement Management System, optimized on Intel® architecture, delivers fast, accurate contactless temperature screening and monitoring.

Executive Summary

Governments and businesses around the world are responding to the unprecedented circumstances related to the coronavirus (COVID-19) pandemic. In many countries and regions, restrictions on citizens' movements have been enforced and focus is on driving effective guidelines on the basic hygiene required to reduce the spread of the virus. Community screening is the most important aspect to reduce this disease spread. Identifying likely infected people correctly helps in controlling the spread well.

One of the measures for effective screening is the use of non-contact thermal IP temperature measurement to screen for elevated skin temperatures in the workplace and business environment. Employees and visitors can have their temperature checked before they enter the work site. This is one of the tools which is key to keep factories, buildings, construction sites, businesses or facilities open. Gamma Solution's TITANUS Body Temperature Measurement and Monitoring System, powered by Intel® architecture, is a thermal imaging and fast temperature detection system that can identify the presence of fever as a symptom of contagious illnesses. It helps in preventing the spread of viruses to enable a safe and healthy workplace.

Ensuring a Safe & Healthy Environment

Thermal body temperature solutions are a tool that can help identify a key symptom of the disease. They can help organizations identify people showing these symptoms while providing a non-invasive method to check body temperature. This tool can do this at faster rates than hand-held scanners and at a greater (potentially safer) distance.

The TITANUS Body Temperature Measurement and Monitoring System provides the first layer of protection at the main entrance and ensures that business operation and safety of the workplace are maintained at maximum level. It provides a no-contact, touch-free temperature measuring platform with the ability to read multiple targets instantly.

The system consists of TITANUS Body Temperature Thermal IP Camera or TITANUS Face Recognition Panel with Body Temperature Detection, which are connected to a Body Temperature Measurement Management platform powered by an Intel® processor. The system is integrated with TITANUS EYEoT solution for AI Video Surveillance or Access Control purpose with a temperature detection accuracy of ≤ 0.3 degree Celsius.

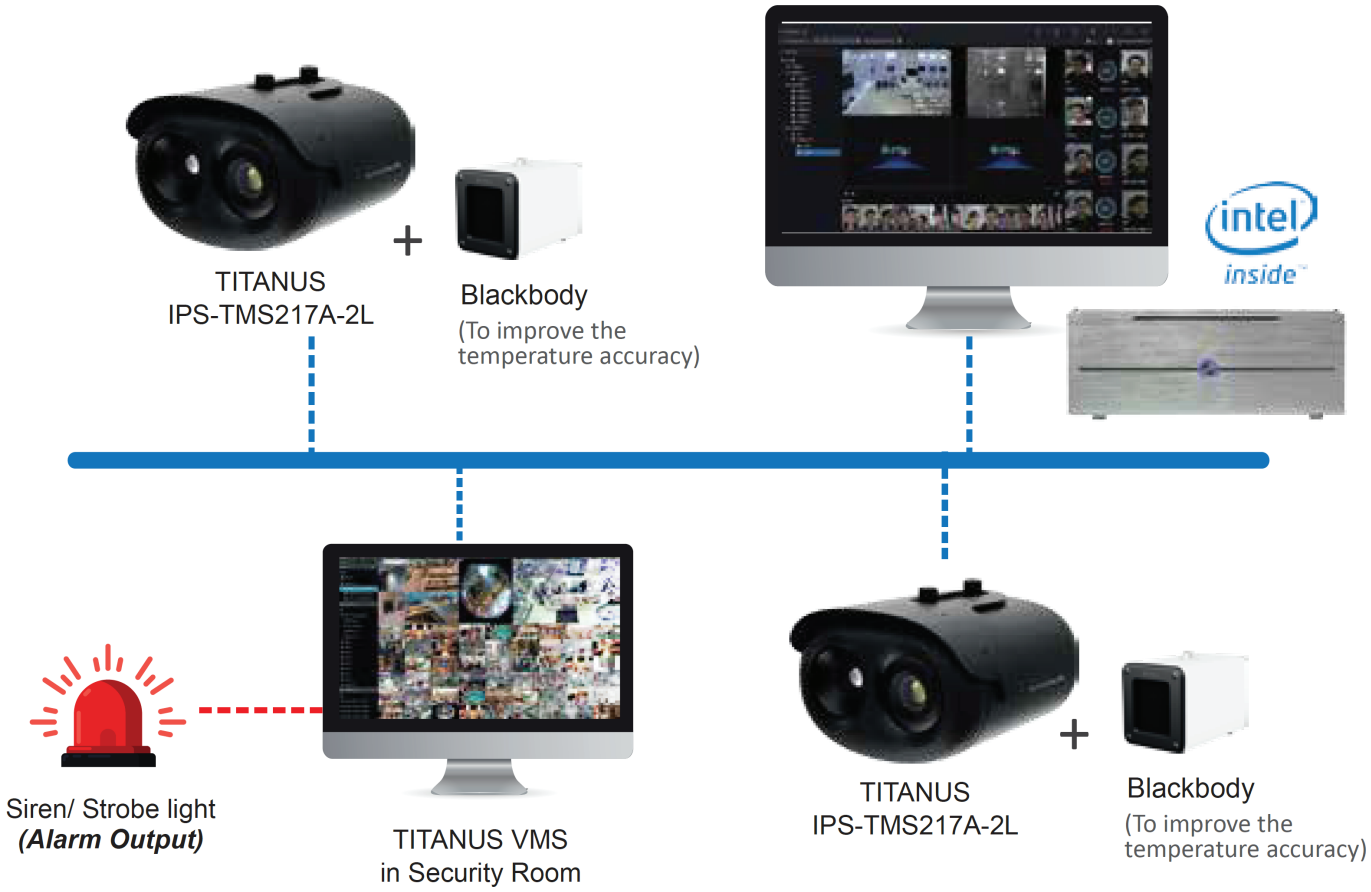

Figure 1. TITANUS Body Temperature Measurement Management Platform

The Thermal IP Camera integrates blackbody devices to help calibrate the temperature measurement and improve the temperature recording accuracy, especially in less controlled environments where the elements can influence the reading. It can detect up to 16 moving or 45 static faces concurrently. Artificial intelligence and deep learning algorithms are also integrated for intelligent face detection and to calculate baseline temperature in real time. The camera can identify a person with a high body temperature, even if they are wearing a mask. When the system detects someone who has high fever, it can give out an alert for immediate action to be taken. The system is also built with big data analysis capability for instant access to visitor's health data, statistics reports and even analysis of epidemic trends.

The Face Recognition Access Panel provides a touch-free body temperature measurement platform with voice broadcast functionality on detection of abnormal temperature. The panel comes built-in with deep learning based facial recognition for more accurate face capturing. The panel supports seamless multi-face recognition with a library of up to 30,000 faces. It also integrates 3D-Live face detection driven by an anti-fake technology, and a multi-alert function that includes not wearing mask alarm, blacklist alarm and high temperature alarm.

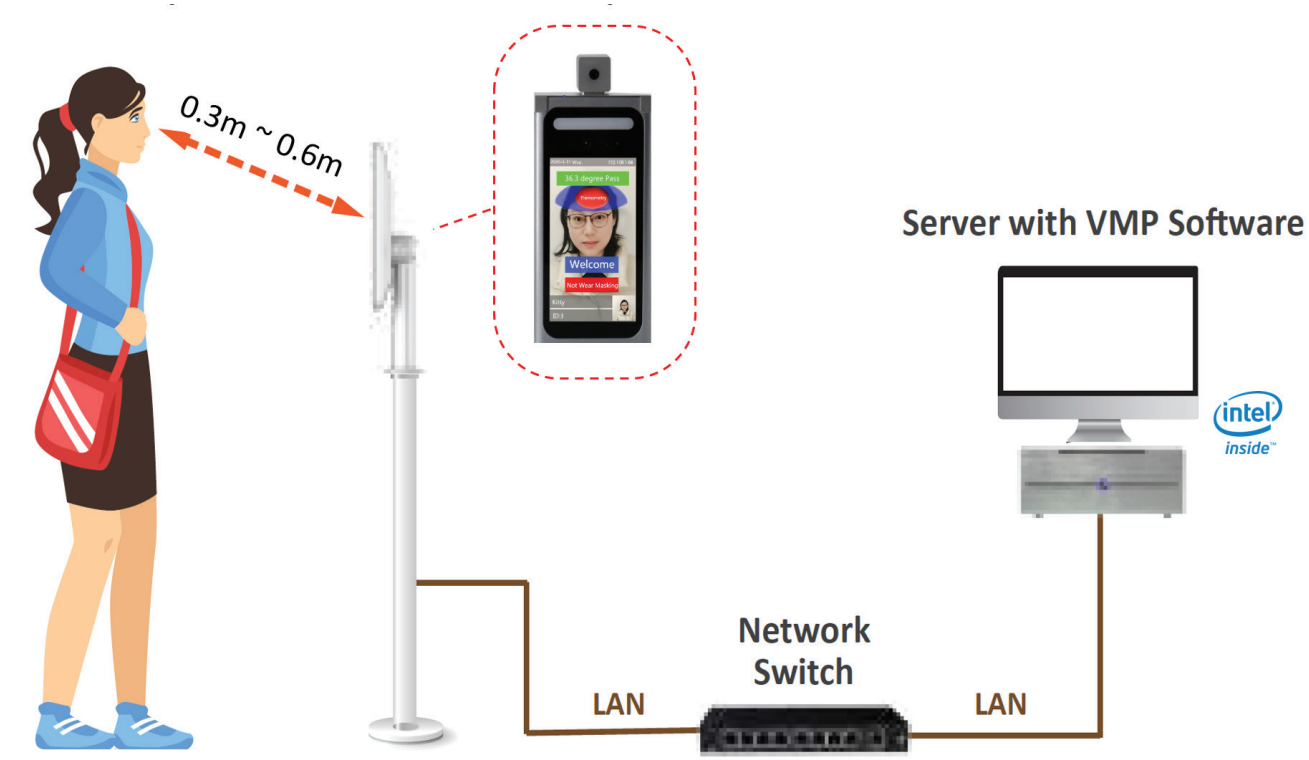

Figure 2. TITANUS Face Recognition Architecture

Seamless Performance with Powerful Intel® Based Platform

The TITANUS Body Temperature Measurement Management System is driven by the Intel® based Body Temperature Measurement Management Platform – the TITANUS Lite BTMS Series System, which acts as the high performance back-end platform. It comes with the Video Management Platform (VMP) application or Central Management System (CMS) to serve the Live Monitoring, Event Searching & Retrieval, and Device & Data Management.

Powered by an Intel® Core™ or Xeon® processor, the TITANUS Lite BTMS Series offers the ready-to-integrate services with TITANUS EYEoT. This includes AI Intelligent Video Surveillance System (TITANUS VMS), Integrated Access Control System (TITANUS Access Manager), and Central Monitoring System (TITANUS CMS).

Use Case Showcase

The TITANUS Body Temperature Measurement Management System can be for any business – both with narrow entrance or wider entrance premises.

Conclusion

The TITANUS Body Temperature Measurement Management System provides organizations to enable a safe and healthy business operation. The solution is powered by Intel® Based Body Temperature Measurement Management Platform which provides the computing power needed to enable a seamless and effective temperature screening platform.

About Gamma Solution

Gamma Solution is an importer, distributor and CCTV Solution Provider company with emphasis on serving CCTV - security system companies, government bodies, and organizations from all over the world. Since inception, Gamma Solution has cooperated with thousands of business partners and has stood strong in the belief that support and quality services are essential in order to be successful in this industry.

About Intel

You may know us for our processors. But we do so much more. Intel invents at the boundaries of technology to make amazing experiences possible for business and society, and for every person on Earth. Harnessing the capability of the cloud, the ubiquity of the Internet of Things, the latest advances in memory and programmable solutions, our rich portfolio of AI technologies, and the promise of always-on connectivity, Intel is disrupting the health and life sciences industry and helping solve the toughest challenges.