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Taiwan deploys AI-based body temp detection technology toÃ?Â contain COVID-19Ã?Â

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AI and infrared thermal image color displays enable the detection of forehead temperatures for multiple individuals concurrently



Taiwan's Industrial Technology Research Institute (ITRI) is developing epidemic prevention technology amid the COVID-19 pandemic.

The use of its Thermal Image Body Temperature Detection Technology together with AI and infrared thermal image color displays enables the detection of forehead temperatures for multiple individuals concurrently. Supported by the Ministry of Economic Affairs (MOEA), this R&D result offers a non-contact, high-precision, full-color detection solution that can improve contact tracing and thus contain the spread of COVID-19.

Unlike most thermal imaging cameras that offer only a single-color image, ITRI's new generation technology is innovative in integrating color cameras and thermal imaging sensors to store color images of people with elevated body temperatures. The new feature of color imagery greatly improves entry and exit controls, addressing the needs of government agencies and private companies that have large numbers of people passing through their doors.

ITRI's Thermal Image Body Temperature Detection Technology combines AI to enable automated detection of forehead temperatures, avoiding errors caused by interference from other heat sources. Temperature compensation technology is utilized in conjunction with the Internet of Things (IoT) to sense the distance between the detection device and heat source, along with ambient temperature and humidity levels.

The system then compensates and calibrates the data detected, and dynamically uploads daily temperature information of the individual, along with ambient data to a database. Indoor and outdoor measurement errors can be maintained within a range of +/- 0.3 degrees Celsius, offering an accuracy of up to 90%.