



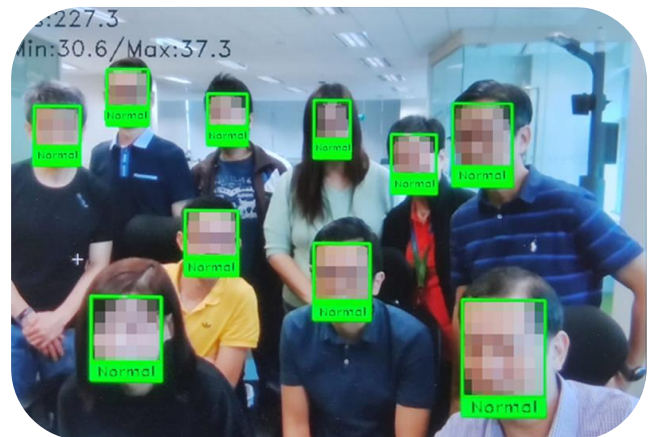
GOVTECH
SINGAPORE

SPOTON

Smart thermal scanner (version 1.0)

SPOTON is a smart thermal scanner designed for quick, easy and safe temperature screening. It screens up to 10 people at once, with automated alarms and email alerts.

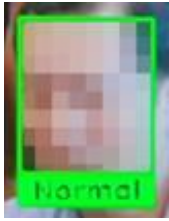
Combining low-cost commercially-available hardware with Artificial Intelligence (AI) software capabilities, SPOTON offers affordability without compromising accuracy. A lightweight mobile device, SPOTON can be deployed both indoors and outdoors with a simple calibration process.



A versatile, lightweight solution

- Consists of an infrared camera (FLIR Lepton 3.5), printed circuit board (PureThermal 2) and RGB-Depth camera (Intel RealSense D435)
- Measures 90mm x 85mm x 30mm
- Can be deployed both indoors and outdoors (away from direct sunlight, with a stable ambient temperature)
- Can be mounted on a tripod or laptop

Colour-coded indicators for easy screening



Green if temperature is within normal range (≤ 37.5 °C)



Red if temperature is high (> 37.5 °C)

Alarm alerts nearby operator
Email alerts



NO MASK is displayed if a person is not wearing a mask

Features

- **Human face detection:** AI algorithms detect only human faces, not objects, for accurate readings
- **Face mask detection:** SPOTON detects and indicates when a person is not wearing a mask with an accuracy of up to 80%*
- **Colour-coded temperature indicators per face**
- **Screens up to 10 faces at once**
- **$\pm 0.3-0.5$ °C accuracy** within a **1.5-2m range****
- **Alarm and email alerts:** When high temperatures are detected, SPOTON triggers an alarm and email alerts to operators
- **Automatic snapshots:** When high temperatures are detected, SPOTON automatically takes and saves snapshots into a local folder
- **Auto-calibration:** Preset profiles for both indoors and outdoors for easy calibration

**Based on optimal lighting condition with no back lighting.*

***In calibration tests conducted with the National Metrology Centre (NMC), SPOTON demonstrated an accuracy of ± 0.28 °C– 0.33 °C for temperature ranges of 36°C, 37°C and 38°C, with NMC's recommended pixel count of 10(V) by 10(H) at a distance of 1.65m.*