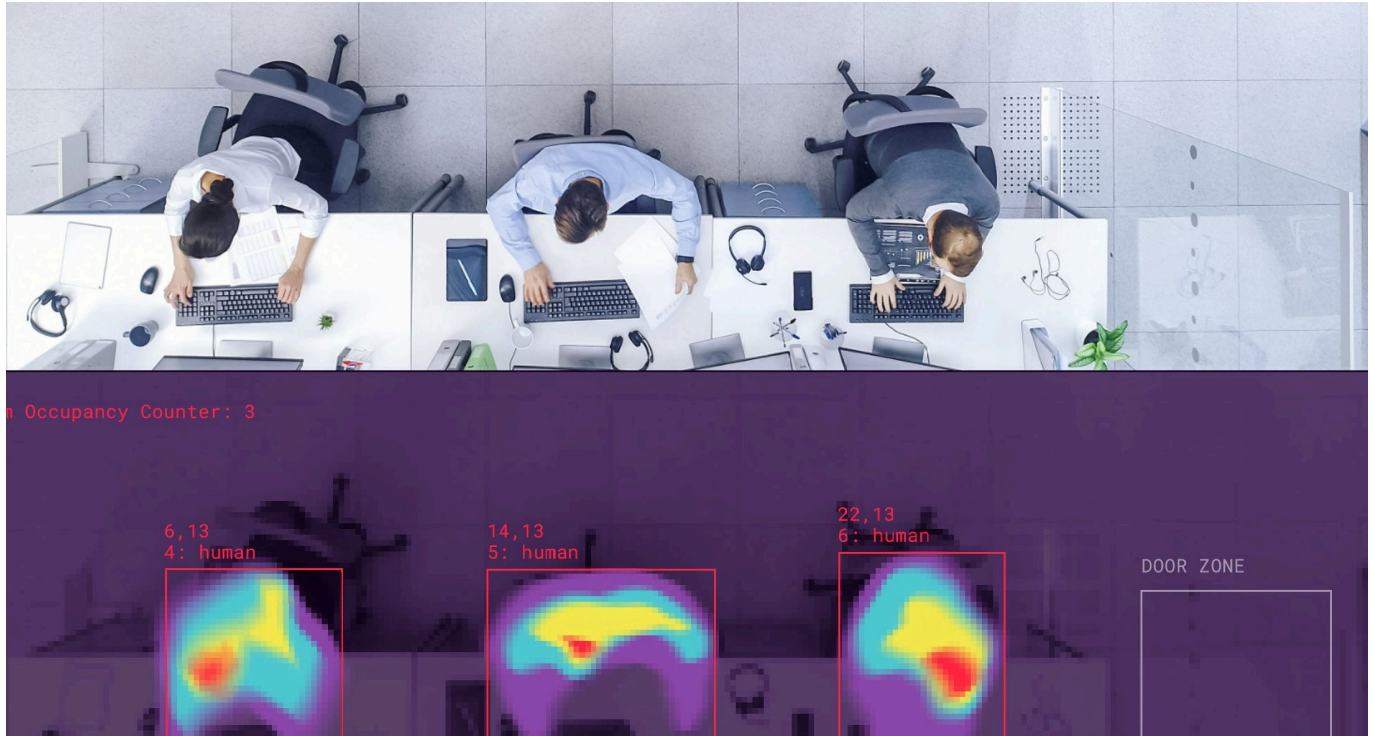**TECH OFFER**

Smart Thermal Sensor

KEY INFORMATION

TECHNOLOGY CATEGORY:

Infocomm - Smart Cities

Infocomm - Video/Image Analysis & Computer Vision

Healthcare - Telehealth, Medical Software & Imaging

Green Building - Sensor, Network, Building Control & Optimisation

Electronics - Sensors & Instrumentation

TECHNOLOGY READINESS LEVEL (TRL): TRL9

COUNTRY: AUSTRALIA

ID NUMBER: TO174689

OVERVIEW

This technology offer is a low cost, smart thermal sensor with proprietary thermal imaging technology. The thermal sensor has edge AI capabilities comprising on-board computer vision algorithms, enabling advanced applications such as human tracking, hotspot tracking and fall detection. The technology has native low resolution so it is privacy non-intrusive and works in all lighting conditions, making it the technology to go for when it comes to monitoring of people, animals, hazardous hotspots and assets in all those spaces where privacy and/or cost are a concern.

TECHNOLOGY FEATURES & SPECIFICATIONS

The smart thermal sensor has the following key specifications:

- Long Wave Infrared (LWIR) sensor
- 36x16 pixels
- Noise Equivalent Temperature Difference (NETD) < 100mK
- Various field of view (FOV) available
- On-edge computer vision analytics for people detection, animal detection, asset detection, hot & cold spot detection, real temperatures

This thermal sensor technology is available for R&D collaboration. It can be integrated into a technology collaborator's product portfolio to develop their next generation products to revolutionize their verticals. The detected events from the thermal sensor can be made available to the technology collaborator's platform via API, for further downstream application processing and analytics.

POTENTIAL APPLICATIONS

- Real estate: optimize building control by privacy non-intrusive people detection, allowing energy efficiency in lighting & HVAC control
- Healthcare: elderly care monitoring, detecting living patterns, sleeping patterns, fall detection, loneliness
- Safety & security: access control, fire detection, evacuation support (based on people presence)
- Agriculture: cold chain management
- Automotive: in cabin pet and child detection, comfort levels, smoking
- Retail: people monitoring to track interest & time spent, with privacy preserved

UNIQUE VALUE PROPOSITION

This technology allows high performance at low cost, and enables a whole new range of applications through heat detection. The embedded edge analytics on device allows ease of evaluation and integration by technology collaborators in the following applications:

- Monitoring assets (remote monitoring, critical infrastructure, machinery, pipelines, etc), monitoring people (detection, counting, man down/ fall detection, trail mapping), monitoring animals (pets and other small animals), monitoring cold chain (food & vegetables), monitoring real temperatures
- Monitoring applications for areas and spaces wherever privacy and/or cost are a concern