



## Plug-and-play Evaluation and Integration

The Calumino Thermal Sensor (CTS) Evaluation Kit (EVK) enables customers to fast-track their product development. It is a simple way to evaluate Calumino's thermal sensor and embedded AI technology. Calumino's EVK offers instant access to AI-generated actionable insights with a direct connection to PC running Calumino's CTS Player or via the cloud platform to enable swift validation of sensor performance and algorithms. The EVK includes the CTS, embedded AI analytics running on a low-power ESP32 processor, CTS player, and integration API.

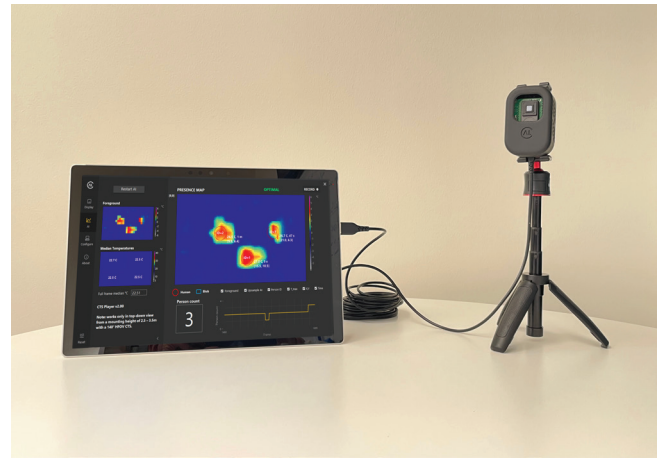
To deliver new levels of insight and control for customers, Calumino has developed powerful and flexible software (CTS Player) to support the CTS and turn its thermal sensor data into actionable insights. Businesses can easily generate these actionable insights in real time and incorporate them into their operations and immediately see the benefits of reduced overhead, improved productivity, and enhanced security and safety.

Today the CTS Player provides accurate person detection and tagging within the field of view, the ability to save raw thermal images, presence maps or just the AI output. The Calumino cloud platform (Thermal.ai) offers additional features such as real-time streams of multiple classes of detections, as well as SMS, email and Slack integrations. Additional AI capabilities will be rolled out on the EVK over time.



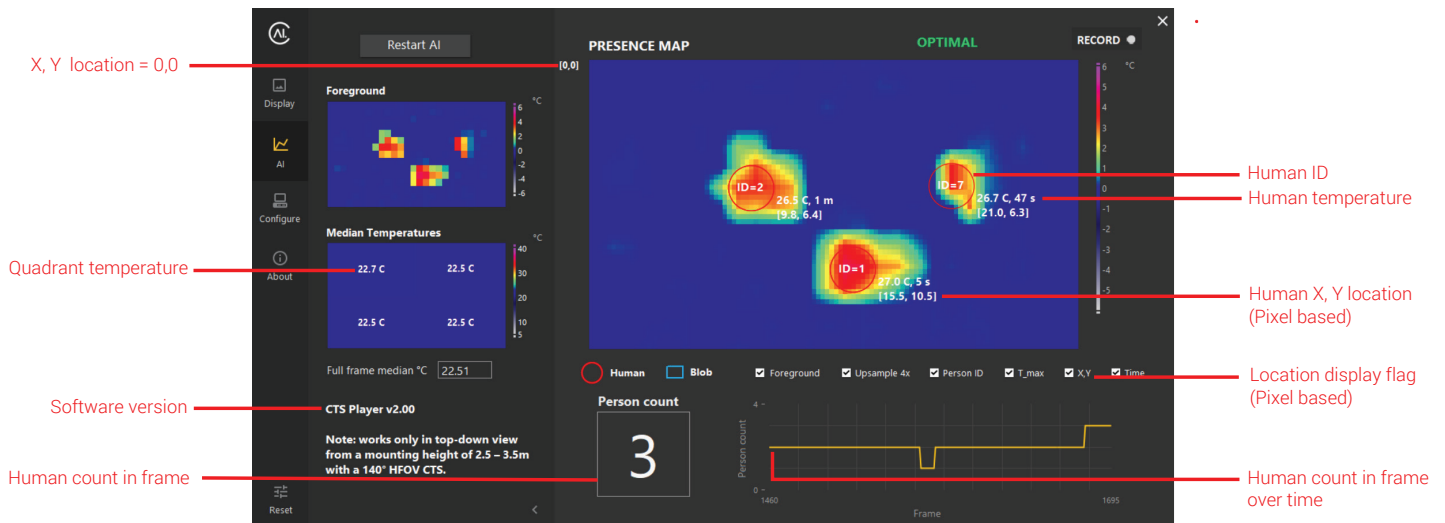
## Included in the EVK

- CTS
- Carrier board (ESP32-WROVER-E)
- Housing (available in either black or white)
- 5m USB cable
- Ceiling mounting bracket
- Tripod mounting bracket
- Free access to on-cloud AI processing and dashboard
- Free usage of Calumino's evaluation software "CTS Player", which runs on a Windows PC



## CTS Player

- PC based application to view live thermal feed, monitor detection outputs such as people counts, X,Y coordinates and temperatures
- Hotspot detection feature
- Save and replay raw thermal data for custom use case post-processing



## Active Area Dimensions

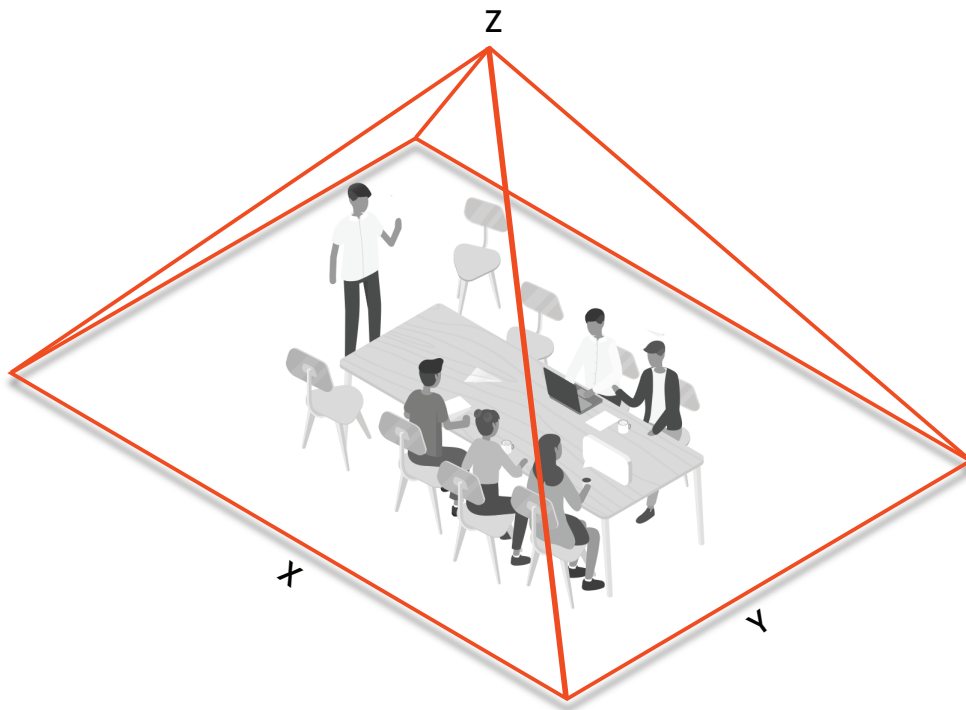
Evaluation Kit (EVK), 140° field of view, with typical mounting heights between 2.0m (6.6 ft) and 4.0m (13.1 ft) has the following active area dimensions (X and Y).

Meters

Height - Z	X	Y
2	6	3
2.5	7	4
3	8	5
3.5	9	6
4	10	7

Feet

Height - Z	X	Y
6.6	19.7	9.8
8.2	23.0	13.1
8.9	24.6	14.8
9.8	26.2	16.4
11.5	29.5	19.7



## Technical Specifications

Design files and schematics can be made available to accelerate integration efforts.

Specification	Parameter
Product code (Field of View)	STSEVK31N030WF (30°), STSEVK31N060WF (60°), STSEVK31N140WF (140°)
Sensor technology	CTS Generation 2.2
Physical dimension (L X W X H)	38 mm (1.5 in) x 45 mm (1.8 in) x 72 mm (2.8 in)
Weight	55 g (0.12 lbs)
Maximum detection distance of person of 1.7m height	30°: 45 m (147.6 ft), 60°: 25 m (82.0 ft), 140°: 6 m (19.7 ft)
Power supply	USB: 5V/1A
Operating modes	On-edge AI*, CTS Player
System requirements	Windows 10 or above
Output data	JSON payload includes application specific counting data in real-time, raw thermal images, scene temperatures and metadata
Output update rate	4 Hz
Network connection	Wi-Fi
Data transmission protocol	MQTT (Wi-Fi), UART (over USB)

\*Available on request

Contact Calumino for a demonstration,  
evaluation kit, or a quote at [info@calumino.com](mailto:info@calumino.com)

