



FootfallCam 3D Pro2

People Counter for Businesses

FootfallCam 3D Pro2™

Artificial Intelligence (AI) Powered 3D Stereo Vision People Counter with Time-of-Flight (ToF) sensor.



The Most Accurate People Counter

- Up to 99.5% accuracy
- Wide angle 160 degree fisheye lens
- Superior Processing Power
- Splash-proof enclosure
- Designed to support low ceiling height (as low as 2.1 metres)

FootfallCam 3D Pro2™ Product Video: <https://youtu.be/nG2XXkMdyTA>

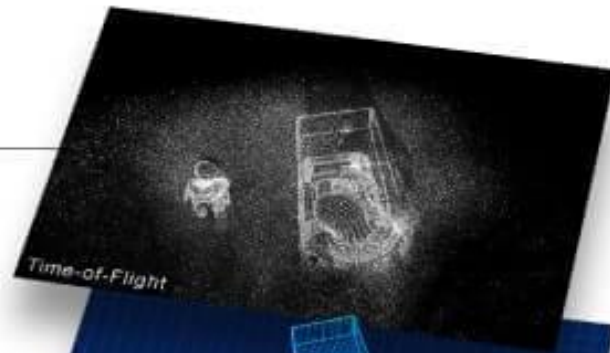
What's New?

- #1: Improved Accuracy
- #2: Combined People Counting Technologies
- #3: Wider Coverage to Reduce the Number of Counters Required
- #4: Aluminium casing to Reduce Operating Temperature and Prolong Lifespan
- #5: Splash-Proof Casing to Reduce Counter Failure Rate
- #6: 5x Staff Exclusion Methods for Different Use Cases
- #7: Object and Visitor Classifications
- #8: One Device, Multiple Applications
- #9: Improved Mounting Height Range with Single Lens

#1: Improved Accuracy

Combining all the people counting technologies, **FootfallCam 3D Pro2™** is optimised to achieve the highest accuracy in the industry, regardless of the environment and varying conditions.

Time-of-Flight



3D Image Processing



Artificial Intelligence



- Combined Counting Technologies
 - 3D Stereo Vision People Counting
 - Artificial Intelligence
 - Time-of-Flight
- Up to 99.5% Accuracy^[1]
- Even in environmentally challenging conditions
 - Strong shadow
 - Inward swinging door
 - Inconsistent Lighting Condition

Watch how it works: <https://youtu.be/nG2XXkMdyTA>

References:

1. FootfallCam 3D Stereo Vision People Counter [Accuracy Statement](#) (PDF)

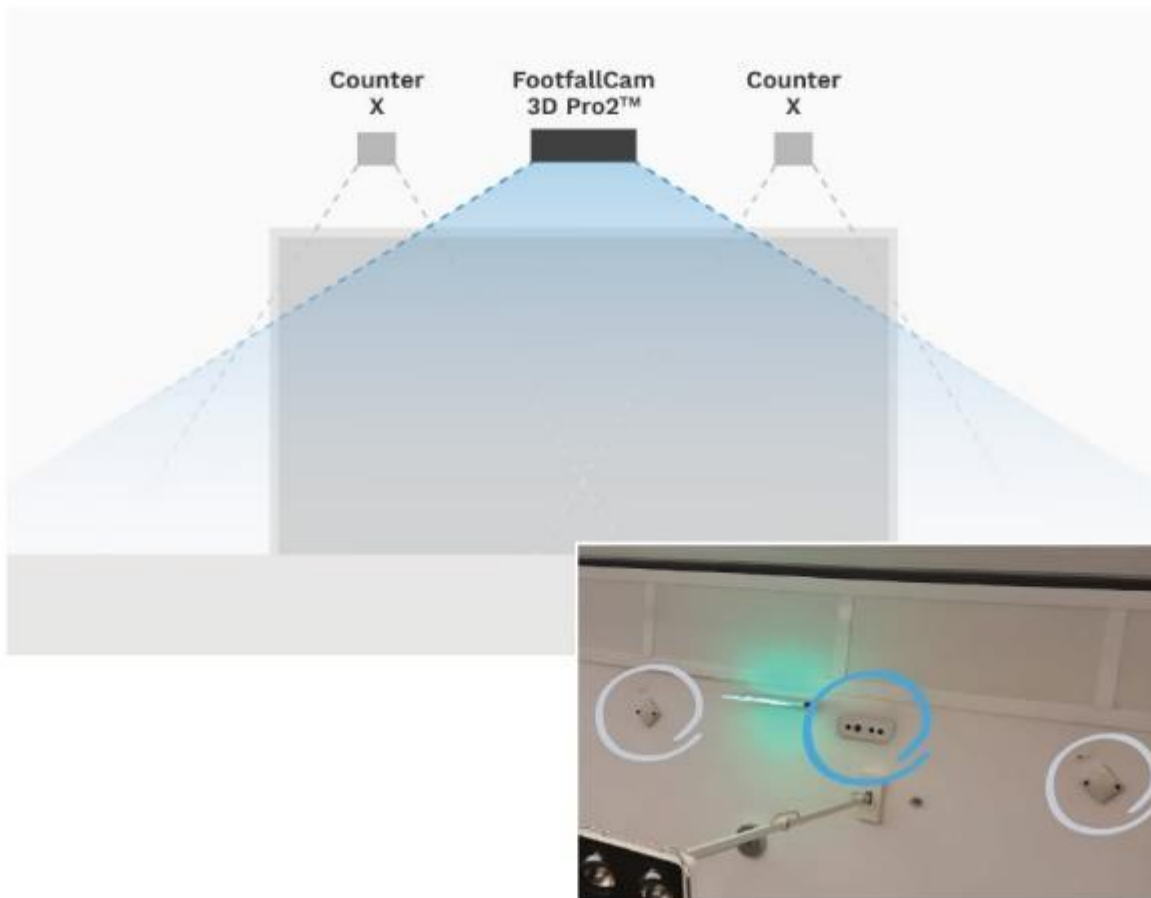
#2: Combined People Counting Technologies

The table below outlines the pros and cons of each counting technology and the advantage of combining all 3x counting technologies to achieve **consistent and high accuracy** in all circumstances, by eliminating the limitations of those technologies.

Technologies	Advantages	Limitations	Accuracy
3D Stereo Vision	Able to differentiate two people walking close to each other	Patterned carpet on the floor Reflective surface at the counting area, for e.g.: mirror	95%
Artificial Intelligence (AI)	Object classification , for e.g.: wheelchair, trolley, stroller, and etc.	Less reliable human walk path tracking	85%
Time-of-Flight (ToF)	25fps fast frame rate High resolution	Unable to count under strong sunlight	90%
Combined 3x Technologies	Reliable counting under all environments	None	99.5%

#3: Wide Coverage Area

Equipped with 160 degree dual fisheye lens, FootfallCam 3D Pro2™ has a wider coverage area compared to other people counters in the market, requires **fewer number of counters** to cover the same area and thus **reducing the total cost of ownership**.



Reduce the Number of Counters Required

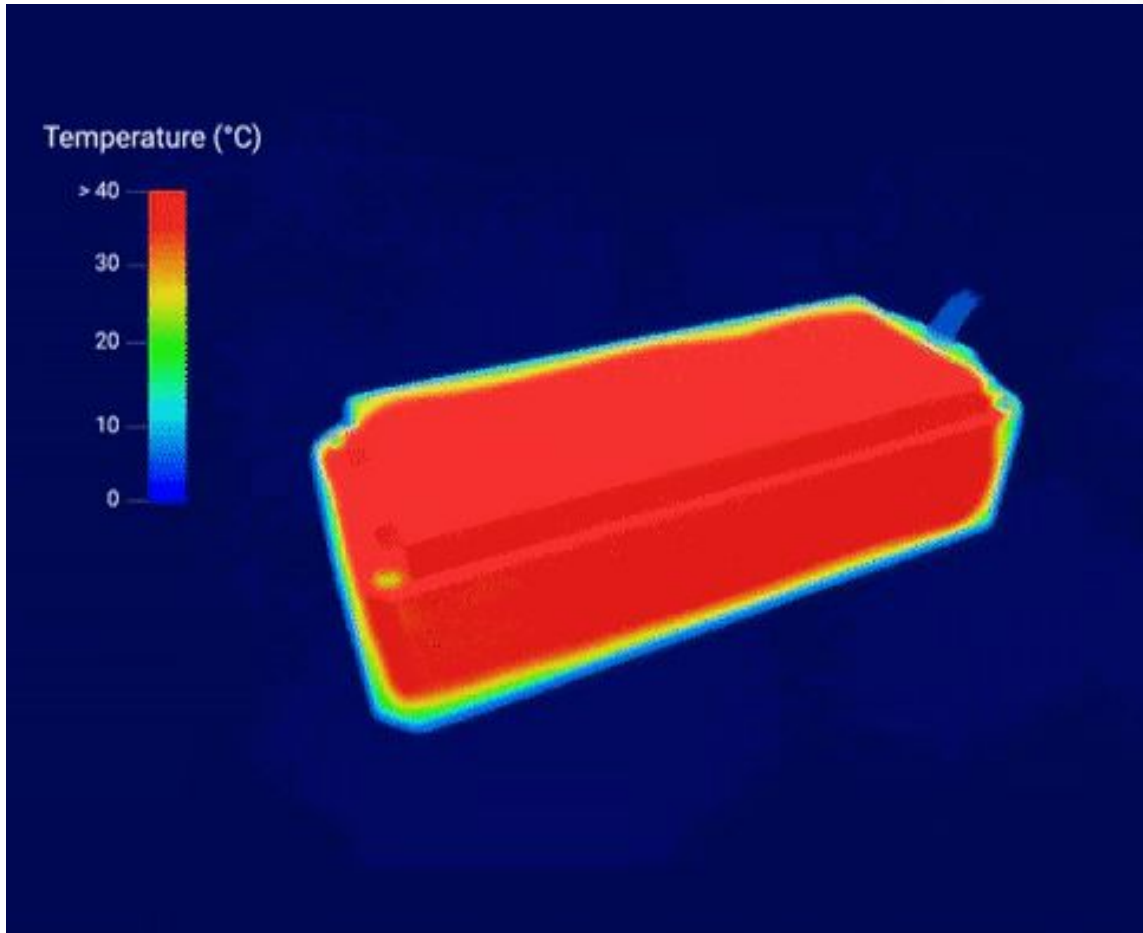
- Up to **30% reduction** on the total number of counters required for a wide entrance
- Wide angle **160 degree fisheye lens**
- Able to cover approximately **497 sq ft** at the ceiling height of **4.5m**
 - Refer to Datasheet ^[1] for full coverage table

References:

1. FootfallCam 3D Pro2™ [Datasheet](#) (PDF)

#4: Aluminium Casing for Heat Dissipation

FootfallCam 3D Pro2™ is enclosed in an aluminium unibody casing, which acts as a **giant heat sink** to optimise the dissipation of heat generated from the core processing unit.



High Reliability with Mean Time to Failure (MTTF) of 25 Years

- Core processor of any digital products naturally generates heat
- Aluminium enclosure has **high thermal conductivity** with superior heat dissipation
- Significantly reduce the **operating temperature** (by 35%)
- **Prolong the lifespan** of electronic components

#5: Splash-Proof Casing

Enclosed in splash proof casing, FootfallCam 3D Pro2™ is designed specifically to reduce the common issue of water damage due to unforeseen circumstances such as water leakage on the ceiling



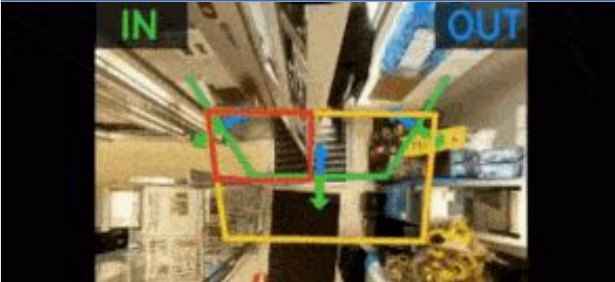
Reduce the Counter Failure Rate due to Water Leakage

- 80% of the hardware failure is due to **water damage**
 - Water leakage from the ceiling
 - Faulty water sprinkle
- Reduce the counter failure rate
- **Increase** hardware **reliability**

#6: 5x Staff Exclusion Methods

FootfallCam offers 5x different methods to identify different types of staffs tailored to their use cases.

Counting Exclusion Zone



Wide Entrance, No Accessories Needed
[Video link](#)

Staff Exclusion Button



Contract Workers (e.g: Delivery Man)
[Datasheet](#)

Discreet Fabric Staff Tag



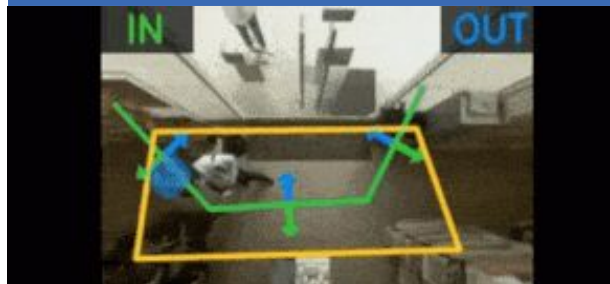
Any Store Staffs
[Video link](#)

AI Staff Exclusion



Any Store Staffs
[Datasheet](#)

Dwell Time Exclusion



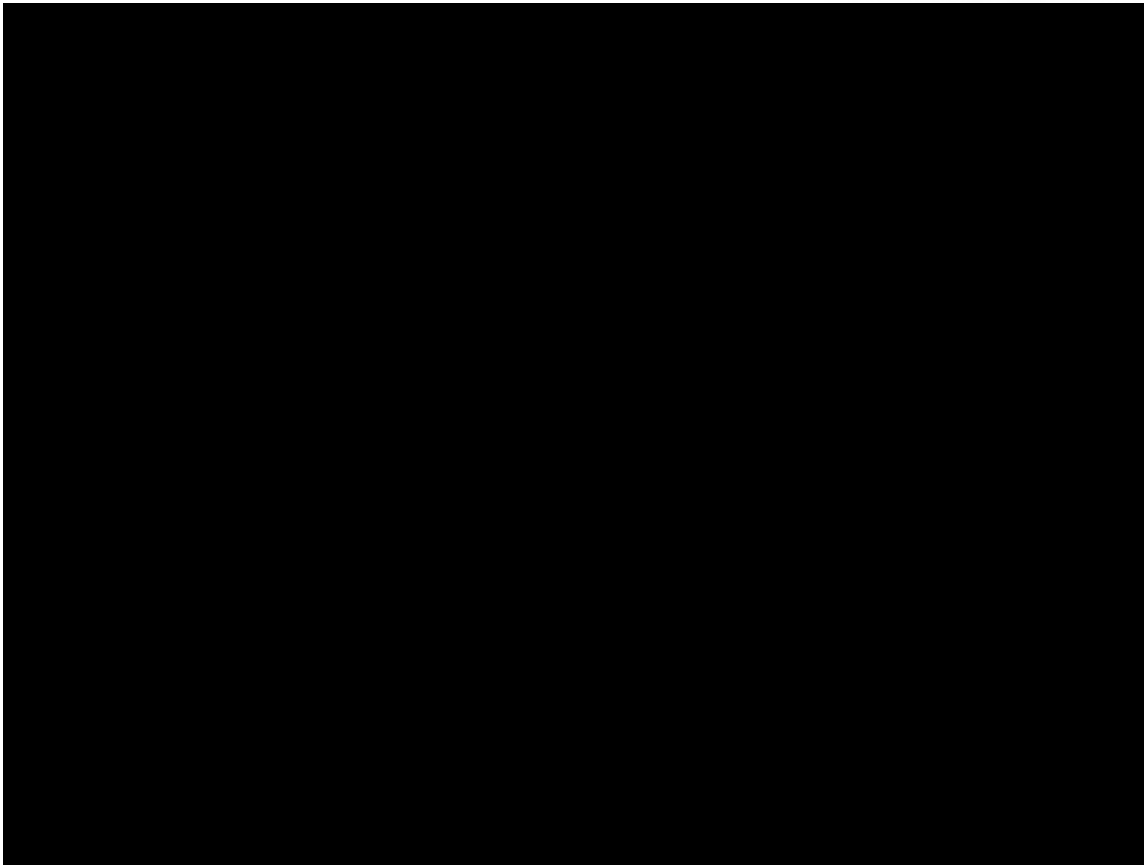
Hovering around Entrance (e.g.: Security Guard)
[Video link](#)

Sample Video:

FootfallCam Staff Exclusion
[Video](#)

#7: Object and Visitor Classifications

Utilising the 3D depth map captured by dual lens, it allows FootfallCam 3D Pro2™ people counter to **determine the height and size** of the moving objects, and **differentiating the objects** from the people using AI algorithms.



Distinguish the Visitors from the Objects

- Using **Artificial Intelligence (AI)**
- Classify the visitors based on the **height**
 - Kids
 - Adults
- **Exclude the objects** from counting
 - Wheelchair
 - Trolley
 - Pushchair
 - Guide Dogs

#8: One Device, Multiple Applications

Supports **multiple counting functions** in a single device, in which users can use the functions interchangeably or relocate for other use cases

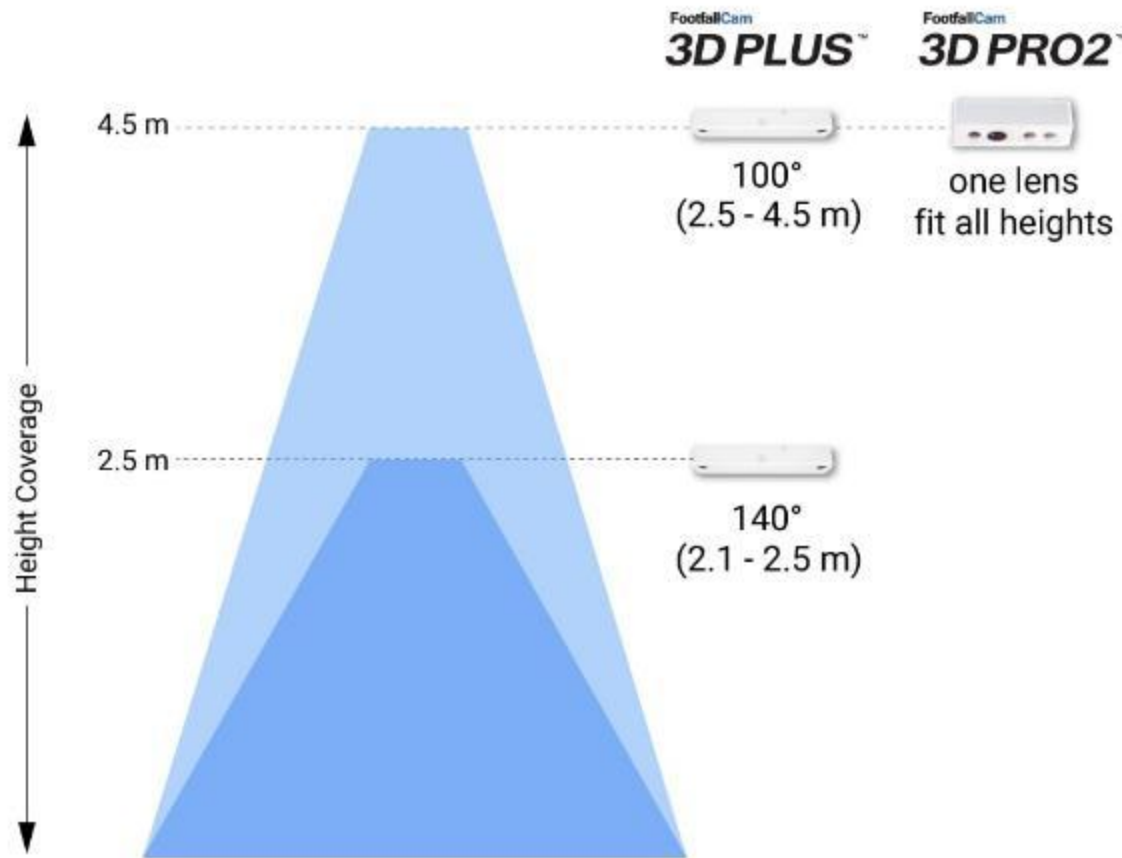


Offers Short Term and Long Term Deployment Flexibility

- In/Out Counting at Entrances
- Multiple Counting Lines
 - Track the number visitors entering different areas
- Heatmap
 - Measure the visitor engagement at different areas of interest
- Queue Counting
 - Queue length, waiting time and serving time

#9: Improved Mounting Height Range




FootfallCam 3D Pro2 is designed to cater for ceiling height between 2.1m – 4.5m without requiring lens type selection or variation from users.






[FootfallCam 3D Pro2 Coverage Table](#)

- Support mounting height of 2.1 metres - 4.5 metres
- Camera lens: 160 degree
 - One lens fits all heights
 - Caters for different types of stores with different ceiling heights
- Reduce logistic and administrative cost
 - Maintain single type of lens variation only

Comparison on Coverage Area

Ceiling Height	3D Plus	3D MAX	3D Pro2
			
2.1m	N/A	N/A	1.57m x 1.17m
2.2m	1.66m x 1.49m	N/A	1.72m x 1.51m
2.5m	2.45m x 1.83m	2.62m x 1.96m	2.62m x 1.96m
3.0m	3.67m x 2.74m	3.94m x 2.93m	3.94m x 2.93m
3.5m	4.16m x 3.10m	5.25m x 3.91m	5.25m x 3.91m
4.0m	4.16m x 3.10m	6.56m x 4.89m	6.56m x 4.89m
4.5m	4.16m x 3.10m	7.87m x 5.87m	7.87m x 5.87m

Comparison on Features

Ceiling Height	3D Plus	3D MAX	3D Pro2
			
Processor	1 GHz processor	1.2 GHz Quad Core processor	1.2 GHz Quad Core processor
Lens	65, 100, 140 degrees	160 degrees	160 degrees
Counting Technologies	3D Stereo Vision	3D Stereo Vision	<ul style="list-style-type: none"> •3D Stereo Vision •Time of Flight (ToF) •Artificial Intelligence
Splash Proof	No	No	Yes (IP65 casing)
Staff exclusion methods	<ul style="list-style-type: none"> •Counting Exclusion Zone •Staff Exclusion Button •Dwell Time Exclusion 	<ul style="list-style-type: none"> •Counting Exclusion Zone •Staff Exclusion Button •Dwell Time Exclusion •AI Staff Exclusion 	<ul style="list-style-type: none"> •Counting Exclusion Zone •Staff Exclusion Button •Dwell Time Exclusion •AI Staff Exclusion •Discreet Fabric Staff Tag

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