

Fast Food Restaurant Solution

Optimise your restaurant operation

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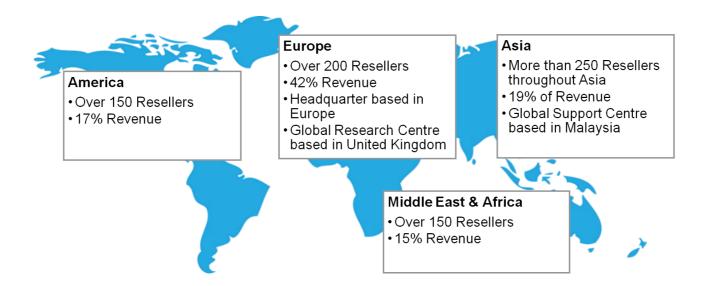


About FootfallCam[™]



Global Leader in People Counting System

FootfallCam is the global leader in people counting solutions. Headquartered in the United Kingdom, FootfallCam started with a team of experienced engineers with the vision of creating the most advanced people counting system in the market. We are the manufacturer of both hardware and software; all the design and development are 100% in-house made.



- FootfallCam is continuously reinvesting more than 24% revenue into research and development
- In-house R&D team dedicated to the development of both hardware and software of FootfallCam
- Combined over 100 years industry experiences in developing people counting solution
- Serving multiple sectors varying from retail, fast food, restaurants, museums to smart buildings and airports.
- Prior to the Covid-19 scenario, our research team predicted the demand for this solution ahead live occupancy we activated our R&D team to develop our Live Occupancy Control System



Agenda

- About FootfallCam
- FootfallCam Products
- Use Cases
 - Use Case #1 Queue Counting
 - Use Case #2 Washroom Management
 - Use Case #3 Seat Occupancy and Desk Clearance
 - Use Case #4 Drive Thru SLA Tracker
- FootfallCam Analytic Manager V9™
- Project Deployment
- Case Studies

About Speaker

DR. MELISSA KAO BSc (Hons), PhD

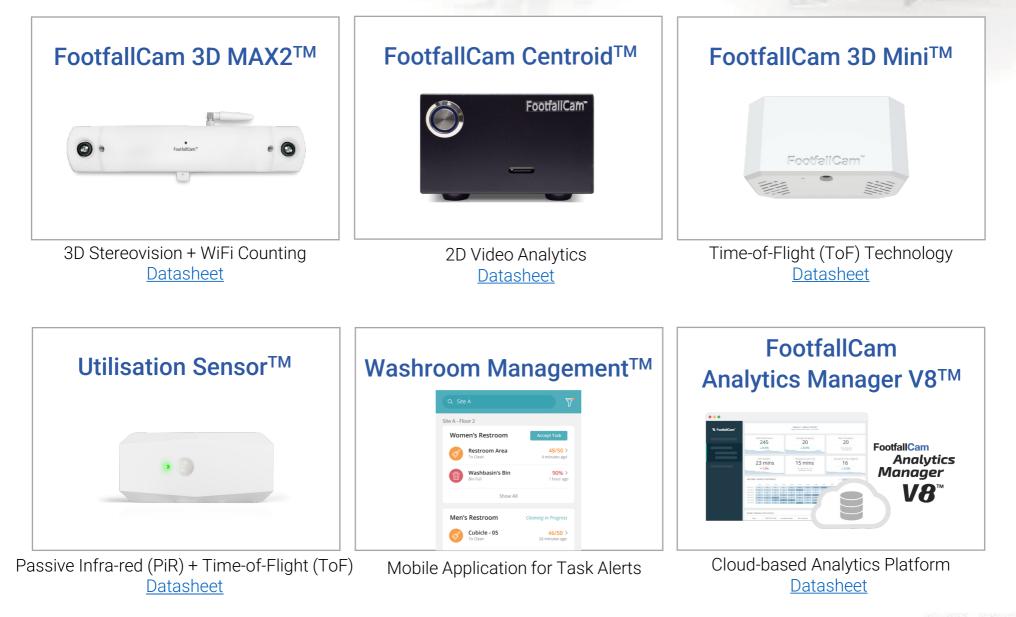
Director of International Sales, FootfallCam UK Limited.

Connect on Linkedin



FootfallCam Products

FootfallCam provides a number of key products, specifically designed for fast food restaurants.





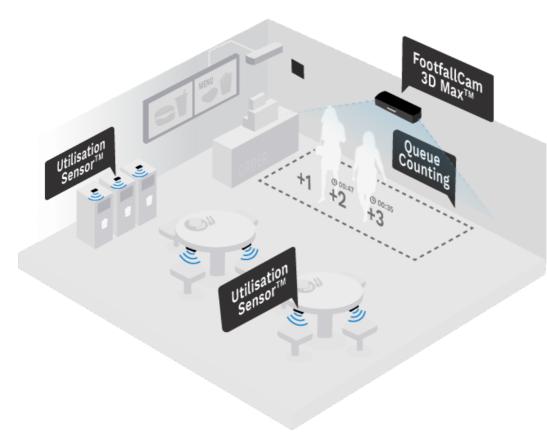
#1: Queue Counting

Monitor your speed of service by managing queue time and length



Queue Counting - Optimise Speed of Service

With queue counting detection and blob tracking technology, the FootfallCam 3D MAX[™] will automatically detect any form of movement and register the queuing patterns.



YouTube Link: https://youtu.be/MFFJfvdylfy

- Using 3D Stereo Vision technology and 2D <u>video analytics</u>
- Highly accurate with video proof
- Suitable for covering wide areas
- Field of view (FOV): 120°
- Proven deployment in KFC (Kentucky Fried Chicken), Applegreen, and more



FootfallCam 3D MAX[™]



Queue Management Report



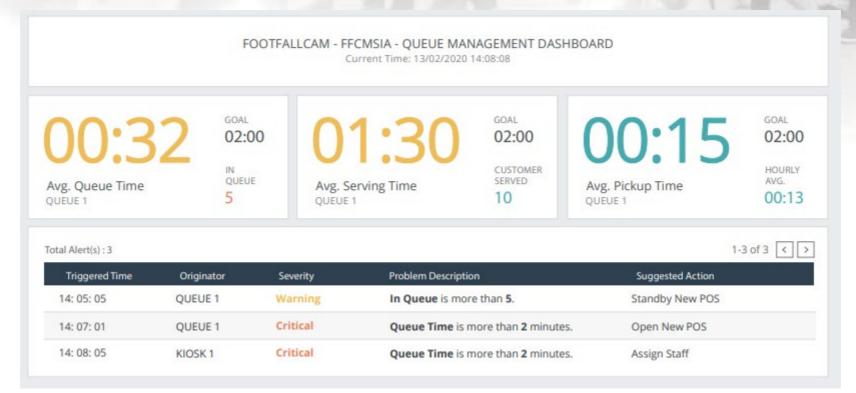
Enable Management to Answer Key Business Questions:

- 1. How long is the average queue length?
- 2. How long does a customer have to wait before they are served?
- 3. How long does a customer have to wait before picking up their food?
- 4. How many customer left due to long waiting time?
- 5. How many customers are served on a daily basis?
- 6. When should I open more counters to accommodate the increase in the number of customers?



View report <u>here</u>.

Queue Management Dashboard



Real-time queue monitoring

Instead of actively managing the queues, managers can use the Queue Management Dashboard to easily keep an eye on the queue length.

Automatic alert during slow customer serve time/long queue length

Enable managers to take actions by sending a notification before the severity of the queue reaches critical level.

Make proactive decisions on the spot

Make decisions based on the Suggested Action shown upon trigger alert, which considers the number of visitors in queue and the average serving time.



Measuring Speed of Service



YouTube Link: https://youtu.be/MFFJfvdylfY

Accurately track the speed of service

By utilizing queue counting detection and blob tracking technology, FootfallCam 3D MAXTM is able to precisely measure customer's queue time and queue length.

Ensure customer satisfaction

Businesses lose 75% of customers due to long queue waiting time. By monitoring queue lengths, managements can reduce customer turnover and increase customer retention.

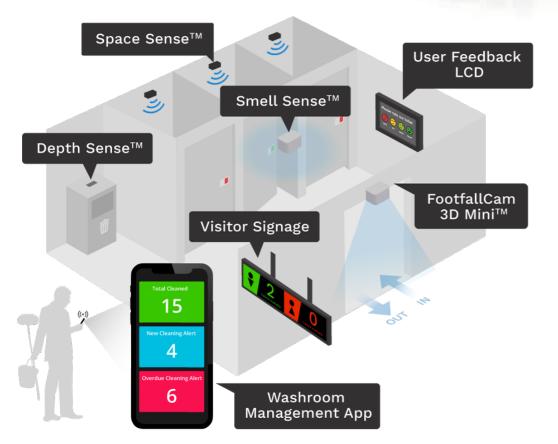


#2: Washroom Management

Demand-based washroom cleaning schedule



Washroom Management – Demand-based Cleaning Schedule



- Washroom cleaning based on actual usage
- Prevent under-cleaned or over-cleaned washrooms issues
- Receive wireless alert via mobile application
- Track SLA via cleaning service log
- Reduce cost based on the most optimal SLA service



FootfallCam 3D Mini™





FootfallCam Utilisation Sensor™

Washroom Management[™]



Washroom Management



YouTube Link: <u>https://youtu.be/iE4f15g5-TE</u>

Demand-based Cleaning

Crews get accurate information about cleaning needs via wireless cleaning notification alert which can lead to improve the efficiency for janitorial services.

Measure SLA and Auditable Cleaning Fee

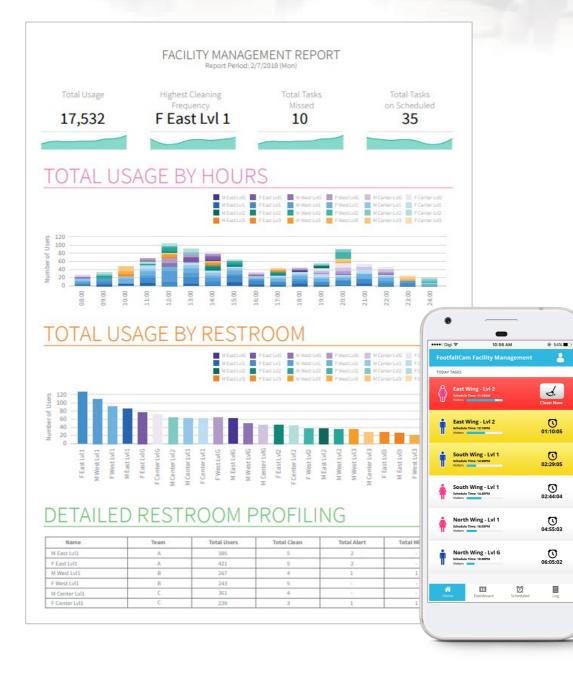
Identify the cleaning service KPI with over-cleaned or under-cleaned which able to optimize the cost of maintenance.

Improve User Experience

A reliably serviced washroom facility is a more welcoming place for its users.



Washroom Management Report



Cleanliness Reassurance

- Provide clear view on washrooms
 historical utilization rate
- Forecast washroom demand usage from historical trend
- Full transparency on cleaning staff performance.
- Measurable KPI for cleaning staff
 performance review
- Utilise available data and feedback to improve user experience

Cleaning Staff Optimization

- Better allocation of cleaning staff based on historical trend
- Cost saving on unnecessarily washroom cleaning.
- Reduce burden and time saving eliminating scheduling work



#3 Desk Clearance and Seat Occupancy

Improving customer's dining experience



Desk Clearance

Desk cleanliness and usage can be measured by installing a FootfallCam 3D MAXTM integrated with FootfallCam CentroidTM above the desk.

Alternatively, the existing CCTV system can also be integrated with FootfallCam Centroid[™] to detect the occupancy of the area.



Table	Status	Duration
1	Clean	15 minutes
2	Unclean	1 minute
3	Unclean	2 minutes
4	Occupied	50 minutes
5	Clean	20 minutes
6	Clean	4 minutes
7	Unclean	6 minutes

Detect cleanliness in real time

Restaurant managements can easily have an overview of the cleanliness level of all desks via dashboard.

Measure staff efficiency

Monitor the time it takes for a staff to clean the desk and ensure that they are according to the restaurant KPI.



FootfallCam 3D Max[™]



FootfallCam Centroid[™]



Space Utilisation – Measure Space Usage



YouTube Link: https://youtu.be/IIEiy8Xo28w

Clearer Insights into Customer's Behaviour

Measure the utilization of different areas of the restaurant especially if there are additional floors or mezzanine.

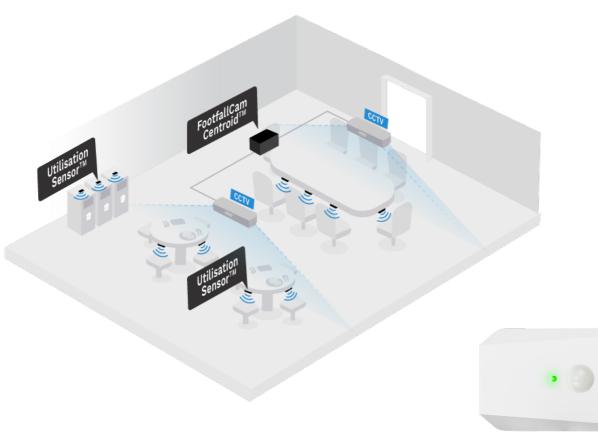
Manage Energy Usage to Reduce Operating Cost

During off-peak hours, managements can minimize the energy usage in different areas of the restaurant to reduce the operation cost.



Seat Occupancy

The number of people sitting in the area can be detected by installing a Utilisation Sensor[™] under each desk. Alternatively, the FootfallCam Centroid[™] can also integrate with existing CCTV system to detect the occupancy of the area.



- Utilisation sensor for desks usage
- Using Passive Infra-Red (PiR) or 2D <u>Video Analytics</u>
- Suitable for open space or large area, e.g.: fast food restaurants, cafeteria, co-working space
- Ease and scalability of its deployment

Utilisation Sensor[™]



FootfallCam Centroid[™]



#4: Drive Thru SLA Tracker

Measuring the serving time at each of the counters in the drive thru



Drive Thru Timer – SLA Tracking System

FootfallCam Centroid[™] connected to existing CCTV cameras in the drive thru area enables management to monitor serving time.



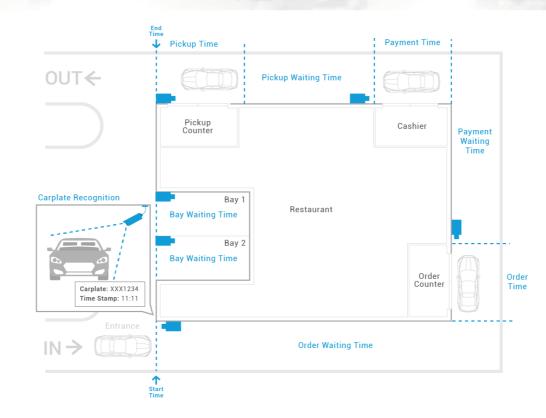
- Easy to install, integrate, and maintain
- Option to reuse your existing CCTV cameras
- 1x Centroid can support up to 8 CCTV cameras (via RTSP)
- Intelligently track individual car plate number with image processing technology
- Real-time display of waiting and serving time of different drive thru counters



FootfallCam Centroid™



Drive Thru Timer – SLA Tracking System



How it works?

- When a customer's car reaches the drive thru, the car plate number and the time stamp is taken.
- As the customer goes through different counters (order, cashier, pickup), the serving time is obtained.



Live Dashboard for Drive Thru Operation



Optimize the Internal Operation

- Identify the bottlenecks and provide correction measures
 - Effective staff allocation based on demand
 - Optimize the speed of service
 - Cost-saving with higher ROI
- Measure staff KPI and performance based on the data-driven reporting

Enhance Customer Experience

- Reduce the waiting time and serving time in different service counters
- Track service time on the live dashboard
 - Ensure customers are served quickly and effectively to improve customer satisfaction
- Improve returning customer rate



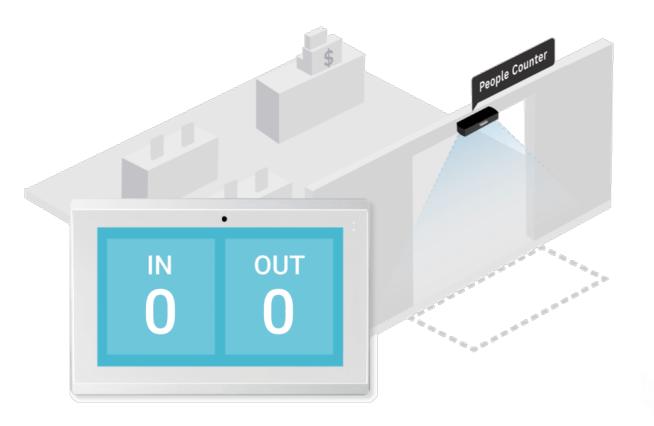
#5: Door Counting + WiFi Analytics

Accurate count on the number of visitors



People Counting at Entrances

FootfallCam 3D MAX[™] cameras installed at the entrances can detect the number of people entering and exiting the premise.



- Using <u>3D Stereoscopic Counting</u>
- <u>Bi-directional counting</u>
- Suitable for wide entrances
- Highly accurate with 98% accuracy
- Wi-Fi Counting and Analytics
- Proven deployment in A.S. Watson, Fred Perry, Joules & etc.



High Traffic Counting: <u>https://youtu.be/kSvj-BoCd6s</u> Children Counting and Object Exclusion: <u>https://youtu.be/cyjo3d5nFdw</u>

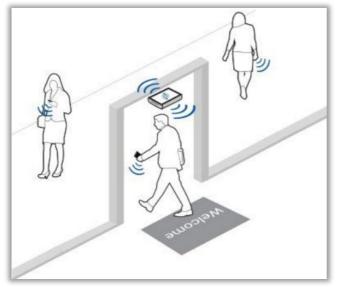
FootfallCam 3D MAX™



Wi-Fi Analytics

Combining the capabilities of both Wi-Fi analytics and video analytics to allow restaurant managers to drive data action insights and make impactful changes in their operations.





- Track in-store customer behavior
- Using Wi-Fi counting to track individual customer's MAC ID
- User privacy protected—<u>Anonymised Data &</u> <u>GDPR Exemption</u>
- Track metrics such as:
 - Returning customer
 - How many customers are returning to your store?
 - Customer dwell time
 - How long does an average customer stay?
- Use Case:
 - Determine the success rate of a marketing campaign
 - Measure store performance based on data-driven KPI



Store Daily Report



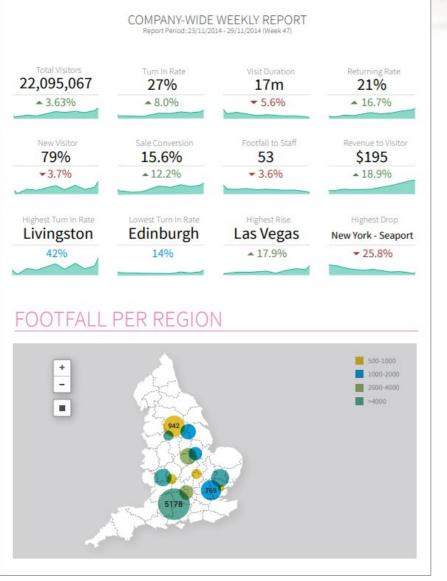
Monitoring the store performance using measurable visitor count data metric

- 1. What is the total number of customers visiting the restaurant?
- 2. How many percent of the visitor from the outside traffic turned into the store?
- 3. How long does an average customer stay in the store?
- 4. How many percent of the visitors are returning customers?
- 5. What is the trend of the visitor count over time?

Section

View report <u>here</u>.

Company Weekly Report



Overview of key metrics for all restaurant chains within the company

- 1. What is the customer traffic profile (dwell time, visit frequency, etc.) of the stores in different regions?
- 2. Which region achieved higher ranking in retaining customer loyalty (returning customer)?
- 3. What is the average turn-in rate across all stores?
- 4. Which is the highest performing and lowest performing store?
- 5. What is the actual store performance when comparing the sales conversion?





FootfallCam Analytics Manager V9TM



FootfallCam Device Management

🕱 FootfallCam ["]	E CP Changelog (R1261) adminCompany 👻 🗄
🔛 My Dashboard	Device Save Cancel Delete Device
Custom Report	Device Info Health Check
Let Analytics < Let Company Reports < Let Site Reports < Maintenance Site Device Image: Company Reports < Image: Company Reports Image: Comp	Device Name Branch GPIO Notification Alert Network Status Offline since 2020-jun-21 16:55 Serial 15F010156895 000000df5v4d21 Device Health Check Low Starage : < 50mb Importance: 80°C MAC Address b8:27:eb:30:a4:dc Device Profile Swinging Door it Swinging Door it Mounting Height (Lens) 3.5m (100°) Swinging Door it Swinging Door it Swinging Door it Last Allocation Date 2019-Dec-27 15:12 Pending Issue Importance: 80°C Warranty Within Warranty Pending Issue Importance: 80°C Expires on 2020-Aug-20 Pending Action Importance: 80°C
	Settings & IT Details Accurancy Audit Floor Plan Related Ticket(s) Internal Workspace Stage #2 First Line Tuning SLA 2 Day(s) Tuned 2019-Dec-29 12:55 (View Report) Notes for Customer

- Designed to manage large number of counters
- Collects data from all counters and centralizes them in a single place
- Fully manage FootfallCam sensors
- Easily add and remove counters from your account
- Edit configurations remotely without going on-site
 - Branch ID
 - Counter ID
 - Number of sensors per branch,
 - Operating hours
 - Etc.

More details can be found <u>here</u>



FootfallCam Health Check

🕱 FootfallCam"	≡					CP Changelo	g (R1261) admin(Company 👻
My Dashboard	Device Manag	ement & Healt	h Chec	k				
Custom Report	Device List							+ New Device
낸 Analytics 〈 난 Company Reports 〈	Device	Serial	Туре	Site	Accurancy Audit	Device Health Check	Device Profile	Pending Issue
🗠 Site Reports 🛛 🔇	MainEntranceL	00000015fsd651 15F010552566	Counter	Bath	#2 Second Line Tuning		Lack of Tracking Area Swinging Door	Live view changed
☑ Maintenance ▼ Site	MainEntranceR	00000015fg58g65 15F010552654	Counter	Bath	#4 Completed			-
Device	Exit	00000015jfhf556 15F010552559	Counter	Bath	#4 Completed	Low Storage:55		-
Setting <	CentroidRetail	1422419047798008084fe 19J01010101003	Centroid	Bath	-			-
Kesources Center	ComputerRetail	100000018d0b681 20R010000001	Mini Computer	Bath	-			-

- Monitor if all sensors are connected and counting.
- Scheduled daily checks at a pre-defined time
- Display counters that are offline for more than 30 mins
- Send automated email alert to person-in-charge detailing any faults found
- Proactive yet manageable approach
- Detects issues such as:
 - Network issue or failures
 - Abnormal data alert
 - Counting data and Wi-Fi data upload checking



FootfallCam Rule Engine

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📰 My Dashboard	Rule Engine		👪 My Dashboard	Rule S	Settings		Save	Cancel
Custom Report Analytics Analytics Company Reports Site Reports Maintenance Company Setting Automated Alert V	Rule Name Company - Weekly Footfall Report Site - Daily Space Occupancy Report Site - Live Occupancy Threshold Breached Alert PA System - Live Occupancy Threshold Breached Site - GPIO Notification Alert Washroom Cleaning Alert	+ New Rule Active	Custom Report Cuitom Report Cuito		Rule Rule Name Type Active Trigger Condition	Branch GPIO Notification Alert Scheduled Event Triggered Event		
Recipient Group Rule Output Template Resources Center ⁴ Q. Marketing Tracker	Instant Device Offline Alert	~	Recipient Group Rule Output Template E Resources Center < Q. Marketing Tracker		Trigger Event	On Update of Metrics When SO01L with Site is Greater Than Threshold 2	Y	
					Output Condition Gateway Recipient(s)	GPIO Driver GPIO Notification Alert x	•	

FootfallCam Rule Engine - List View

FootfallCam Rule Engine - Settings

- 500+ different rule templates
- Customised rules using Python, interface with:
 - FootfallCam raw data, or
 - Aggregated metrics
- Automatic notification via SMS, Emails, Android and iOS Apps



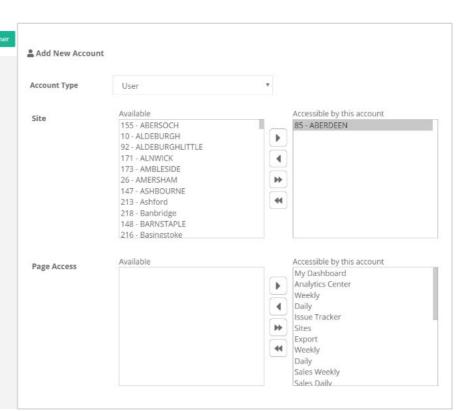
Account Management

Individual user accounts can be setup for team members and assign access rights accordingly.

Account Type	Description	Example
Admin	Can create more accounts and remove	CEOs are able to restrict the store managers'
Aumin	unwanted accounts.	access to certain data metrics.
Lloor	Limited access in account creation and	Store managers are only allowed access to their
User	removal.	own store's data.

User Accounts [®]

Users	Account Type	Email	Last Login	Delete User
loules	admin	marcin.klosok@joules.com	4/16/2020 5:44:14 AM	
Marcin Klosok	admin	Marcin.Klosok@joules.com	4/2/2020 10:38:30 AM	×
Jeannette Copeland	user	Jeannette.Copeland@Joules.com	6/21/2017 8:15:58 AM	×
Ben Warren	admin	Ben.Warren@joules.com	2/20/2020 11:22:57 AM	×
Marc Dench	user	Marc.Dench@joules.com	9/7/2017 8:49:57 AM	×
Lindsey	user	Lindsey.Rowley@joules.com	1/29/2018 3:26:43 PM	×
JamesH	admin	james.hollingsworth@joules.com	8/3/2019 10:22:21 AM	×
Jody Bwye	user	jody.bwye@joules.com	10/5/2018 4:46:27 PM	×
Lauren	user	Lauren.Peace@joules.com	3/4/2019 12:25:47 PM	×
jess Welsh	user	Jess.Welsh@joules.com	1/1/1970 12:00:00 AM	×
Kelly Perkins	user	Kelly.Perkins@joules.com	10/8/2018 5:09:33 PM	×
James Oneill	admin	james.oneill@joules.com	1/30/2019 10:17:04 AM	×
Alex Kirk	admin	Alex.Kirk@joules.com	11/13/2018 3:02:23 PM	×
Chris Sutton	admin	chris.sutton@joules.com	4/14/2020 4:06:28 PM	×
Tejal Chandarana	admin	Tejal.Chandarana@joules.com	3/11/2019 10:59:12 AM	×
Nick Weare	admin	Nick.Weare@joules.com	4/14/2020 4:05:56 PM	×
Danie Earl	admin	daniel.earl@joules.com	2/17/2020 2:26:20 PM	×
Richard Sortwell	admin	Richard.Sortwell@joules.com	1/1/1970 12:00:00 AM	×





Customisable Dashboard and Reports



View Custom Report Demo here.

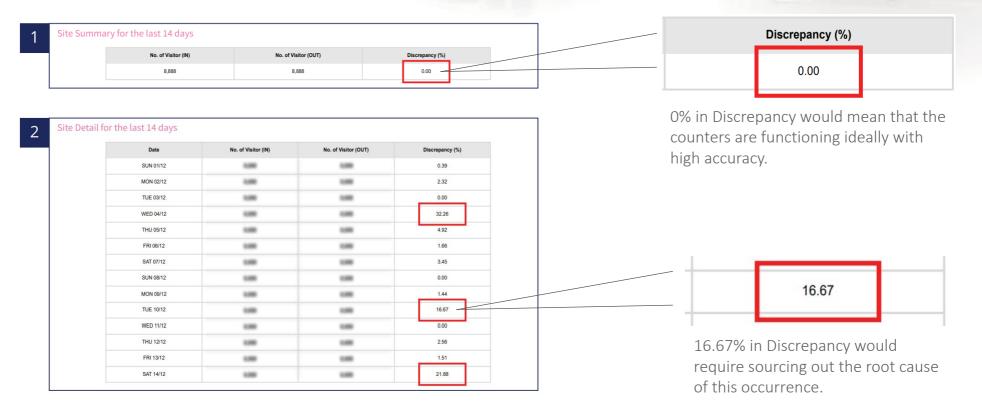
In addition to the 60+ readily available reports, FootfallCam has an array of widgets available which can be used to combine and make customised dashboards and reports to address your business requirements. Here are a few examples of the reporting formats available:

- Line chart
- Bar graphs
- Monthly trends
- Heatmap table
- Floorplan



Maintaining Data Integrity

The Data Integrity Report allows users to monitor data discrepancies and site changes. For example:



To recover the missing data, FootfallCam server will re-aggregate the raw data stored in counter level and store the re-aggregated data in the server. Hence, users can retrieve the missing daily or hourly data so that macro trends will not be affected.

More information can be found here.



Accuracy Audit

How do we audit accuracy to ensure 95% and above counting accuracy?

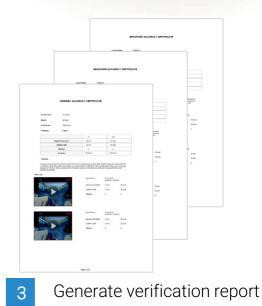
🗉 Dashboard 🗸 🗸						
Dashboard	Verifying Video 🍳		Create New Recording			
Footfall Data						
Analytics Center		Schedule Recording				
Reports *	Site: Manchester 2 Videos Upload Tim	Site operating hour: 09:00 - 20:00				
Company Reports	Select multiple video	Counter local date time: 2018-06-28 02-6	6654 G			
Footfall Weekly Footfall Daily		Recording Time 1: 11:00	• 30 min			
Sales Conversion	Videos	Recording Time 2: 13:00	* 30 min		Status	Video
Weekly Sales Conversion Daily	08/03/2018 1 (online sin	Recording Time 3: 18:00	* 30 min	d in rt	•	×
Marketing Effectiveness	B 05/03/2018 /	Recording type: Normal	•	d in	•	×
Opening and Closing Time	09/01/2018 1	Recurring untit: 29/06/2018	or being verified			×
Store Comparison	(celling pire	* Existing schedule will be replaced by new sele matched * Maximum recording per day: 3 schedules	cted recording time if same day is	0		
Report Store Reports	(priling sim			d	•	×
Footfall Weekly	(online sim		Set schedule Can	d la	•	×
Footfall Daily Sales Conversion						
Weekly						
Sales Conversion Daily						
		é				
		-				

Schedule video recordings of peak hours to ensure there is sufficient sample size (20 and above) for to audit the accuracy of the counter.



2 Compare system count and manual count

Compare the system count generated by the FootfallCam device against manual observations to determine the accuracy of the FootfallCam.



Once there is sufficient sample size and the accuracy is satisfactory, a verification report with the video proof used in manual observation will be generated.

(Verification report: <u>Sample 1 & Sample 2</u>)



Built-in maintenance support portal

The one-stop support center for all FootfallCam Analytics Software users.

Any technical issues can be raised via the Support Portal and this will be assigned to a technical personnel accordingly.

			Raise a Trouble Ticke	t	×		
Tro	Trouble Tickets		Reported Device(s)	Company level			
Footf	allCam Trouble	Ticket	Ticket Subject	Please input ticket subject			
			Category	Data Not Accurate	~		General Search: Input Ticke
	Ticket # 🔺	Ticket Subject 🔹	Cat When does it	to		 Status 	Requester 🔺
X	2002-32977		diff		ne)	Closed	
	1911-32286		oth Comment		26)	Closed	
1	1911-32221		No			Closed	Marcin123 <marcin.klosok@joules.com></marcin.klosok@joules.com>
	1908-1328		No		+	Closed	
	1906-0988		No			Closed	
	1906-0964		Attachment	<u>Attach File</u>		Closed	
	1905-0597		No CC 😧			Closed	
*	1905-0575		No			Closed	
				Cancel Sub	mit		

More information can be found here.



Data Privacy and GDPR Exemption

Low-Resolution Video Image (320 x 240)

3D Depth Map



- Counters installed downwards facing the ground does not capture the customer's identity & unable to pick up facial features.
- Videos are recorded only for verification purposes and taken in low resolution. The videos will be deleted once verification is completed.
- FootfallCam uses 3D depth map instead of video images for counting purposes data collected are non-visual and are will not be able to be identify with any individuals.
- FootfallCam is exempt from GDPR. More information can be found <u>here</u>.



Management Control

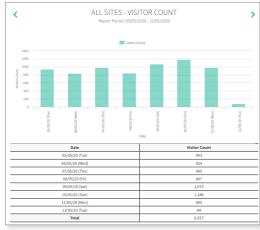
ccount [©]			add us	Counter Management	Export IT Settings	Email Schedul	er 🎱			Import [®]
Users	Account Mail Mail admin@exampleemail.com	Last access 05/20/2020 4:55:02	Delete user	1. How to add counter? Counter Management > + Add Counter > input serial > Add 2. How to Change counter name? Counter Management > Details > input Counter Name > Save			up to receive scheduled email			Import Setting You may downlad the sample CIV I/a Sales Conversion template for references. Manual Upload Automate Upload
If Team admin tit@exampleemail.com 01/01/1970.00000 x Ste1 user ste1@exampleemail.com 01/01/1970.00000 x			×	3. Inter trapped framework A. Context Management or Database Annumeric Vention = Loggade b. Company Setting = Firmware Update = Angula Number 4. What to do during counter inductors			te: ximum of 20 email per user group.	Delete Selected	Manual uppose Automate uppose Data Configuration	
				Counter Management > Details > Delete Counter > Counter Mana			User Group Name	Email	Edit	Import Data Type 🕢 Sales Data 🔹
				2D Latest Firmware: 2.2.1 3D Latest Firmware: 3.2.2			IT GROUP	user-1@footfallcam.com user-1@footfallcam.com	Edit	Sales File Format FootfallCam format
				Cempany: Sample Cempany Total Stec 22 stic(s) Total Counters: 19 counter(s)	+ Add Site		Report Group	user-2@footfallcam.com user-2@footfallcam.com user-2@footfallcam.com user-2@footfallcam.com user-2@footfallcam.com	Edit	Upload File Browse
				Site: Site 1 (1 counter(s)) Counters: Counter 1 (00000007b177667/15PO10226368) (3.2.2) - Verified	+ Add Counter 🌣 Settings Details		п	user-3@footfallcam.com	Edit	Required Fields Available Fields in CSV File 11 Site Code
				Site: Site 2 (2 counter(s)) Counters: Counter 2 (00000007/b177667/15FO10226369) (3.2.2) - Verified	+ Add Counter 🏚 Settings Details					Site Code Drag and Drop No file is uploaded yet. Date / Time •
				 Counters: Counter 3 (00000007b177667/15FO10226388) (3.2.2) - Verified Site: Site 3 (1 counter(s)) 	Details + Add Counter 🌣 Settings	Email Sche	duler			Total Transaction Value
			Counters: Counter 4 (00000007b177667/15FO10226377) (3.2.2) - Verified Site: Site 4 (1 counter(s))	Details + Add Counter Ø Settings			ay set the time of the report to be sent		Note: All fields must be defined correctly to ensure data is imported successfully.	
				Counters: Counter 5 (000000007b177667/15PO10226399) (3.2.2) - Ver/fied	Details	Dat rep	e: a Aggregation happen at 4am daily, dela ort data to be incomplete	ay in data upload to server due to internet connection	n issue may cause the	Import
and readfaller-				Site: Site 5 (1 counter(s)) Counter(s) Coun	+ Add Counter ¢ Settings Details					
	User Contro			Branch Co	ontrol		Emai	il Schedule	r	Import/Export

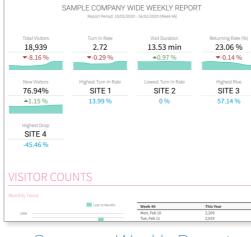
Health Check and Maintenance Tools

DATA INTEGRITY REPORT Sanday 2002/2020	Company Data Integrity Report	Issue Tracker Leport to Leef file	
SITE LEVEL	SAMPLE COMPANY's Data Integrity Report 12/05/2020	-Fill in the LED light color in the select box after you have checked on the counter -follow the Counter Checking form to diagnose the counter issue	Trouble Tickets
Site Summary for the last 14 days	Company Level Summary	Row indicated with red color = Offline site / counter [] Row indicated with blue color = FootfallCam to Action []	FootfallCam Trouble Ticket
No. of Visitor (in) No. of Visitor (Cut) Discrepancy (%) 2.354 2.479 2.17	Data Availability: 11 / 11 Site 19 / 19 Counter	- Rew indicated with yellow color = Customer to Action [] 19 counter(s) found	No toket found
Site Detail for the last 14 days	Аддregate Data Аддregate Data Ассигасу ваши Мото селинали О Site	Company Service Advances Magnetic Advances Magnetic Advances Total Unaverties & Documenting Total Unaverties & Documenting Total Unaverties & Documenting Service Advances National Advances and Advances	
Date No. of Visitor (Cot) No. of Visitor (Cot) Discrepancy (%) 50x11002 339 319 5.90 Mon 1702 1104 100 3.85	Non-aggregate Unitine Usate Data Tuning in Progress 0 Site	Total Offline 9 counter(s) Total house Bloeds. FootalCarino to Anton - Countomer To Anton -	
Tue 1802 128 124 3.13 Weit 1902 100 103 2.83 Thu 2002 87 83 4.60	OK Accuracy Issue Coffine Trunning in Progress	Site Name: Site 1 Site Code: FM Site Configuration Data Integrity Total Counters: (Site wrified) SUK-	
Fri 21/02 134 136 1.47 Set 22/02 332 319 3.92	Categories Issues No. of Counters Responsible	Customer Feedback Footfallcam Feedback	
Sun 23/02 332 319 3.92 Sun 23/02 322 313 2.80	Device is working 🚱 0 FootfallCam	- Category - Category -	
Mon 24/02 109 108 0.92 Tue 25/02 86 89 3.37	Network Issue 🚱 0 Customer		
108/2302 80 80 3.37 Wed 26/02 121 120 0.83	Cable Issue Cable Issue Offine Device Cannot Boot Up O Customer Customer	Counter System Message Action	
Thu 27/02 130 130 0.00	Not in Use 0 0 -	- Test	
Fri 28/02 162 161 0.62 Set 29/02 374 374 0.00	No Light 🚱 0 Customer	0000000043544e6 Counter / Environment Constraint(s): Video	
Site Summary for the last 120 days	Pending Customer Feedback	15F010226567 (3.2.2)	
No. of Visitor (In) No. of Visitor (Out)	Customer To Resolve @ 0 Customer		
	Site Visit Required	Site Name: Site 2 Site Code: FINA Site Configuration Data Integrity Total Counters: 2 (Site verified)	
Data Integrity	<u>Company Data Integrity</u>	<u>Issue Tracker</u>	Support Portal



Reporting Suite

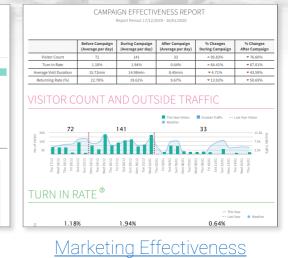


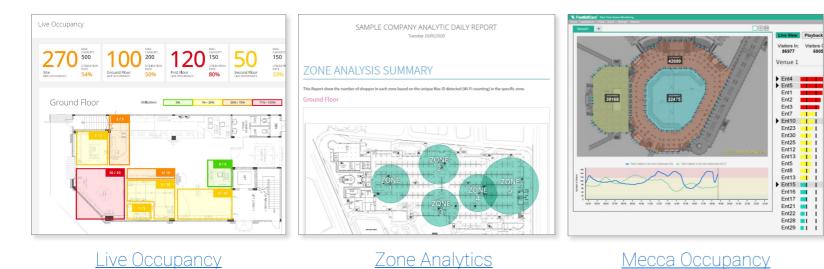


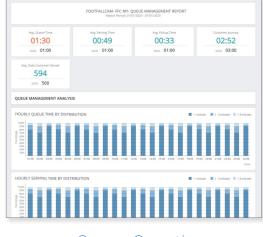
Analytics Center

Company Weekly Report









1

Queue Counting

Section

Solution Deployment

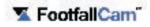


Deployment Process



- More than 1,000 units in stock in our warehouse
- Ready to ship out within 1-2 working days
- Each installation should take approximately 1-2 working day
- Data validation to be done within 3 days after each installation





Agile Framework: Scrum for Service Delivery

	FootfallCam UK Limited									
		Start Date	Wed, 7/	29/2020	1					
		End Date	Wed, 12/	22/2021						
				-	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20
JOB CODE	TASK	ASSIGNED TO	START	END	DAYS 24 27 30		1 4 7 10 13 16 19 22 25 28	1 4 7 10 13 16 19 22 25 28 31	3 6 9 12 15 18 21 24 27 30	3 6 9 12 15 18 2
PRO-1345	Analyse and gather stakeholder's requirement	FFC & Client	7/29/20	8/2/20						
PRO-1346	Review conference	FFC & Client	8/3/20	8/3/20						
PRO-1348	Propose deliverables	FFC	8/3/20	8/7/20						
PRO-1349	Evaluation and notice of Short-listed	Client	8/7/20	8/14/20						
PRO-1367	System Demonstration and Testing	FFC & Client	8/14/20	8/28/20						
PRO-1348	Floorplan and coverage list submission	Client	8/29/20	9/5/20						
PRO-1354	Preliminary proposal design review	FFC & Client	9/5/20	9/12/20						
PRO-1356	Contract Negotiation	FFC & Client	9/12/20	10/30/20						
PRO-1373	Notice and acceptance to proceed	Client	10/30/20	10/30/20						
PRO-1455	First Batch of Delivery	FFC	11/1/20	11/4/20						
PRO-1455	Second Batch of Delivery	FFC	11/19/20	11/22/20						
PRO-1455	Third Batch of Delivery	FFC	11/27/20	11/30/20						
	Pre-Installation									
PRO-5643	Software training	FFC & Client	11/2/20	11/2/20						
PRO-3488	Risk Assessment and method statement	FFC	11/2/20	11/2/20						
PRO-3483	Application for Site installation Permit	Client	11/2/20	11/5/20						
PRO-2345	Input and Configuration of IT details on Analytic Manager	FFC	11/2/20	11/2/20						
PRO-2456	Installation Preparation (First Phase)	FFC	11/2/20	11/5/20						
PRO-2456	Installation Preparation (Second Phase)	FFC	11/16/20	11/19/20						
PRO-2456	Installation Preparation (Third Phase)	FFC	11/24/20	11/27/20						
PRO-2452	Installation Date and time arrangement	FFC	11/2/20	11/5/20						
	Installation									
PRO-3577	Devices Installation (First Phase)	FFC	11/4/20	11/24/20						
PRO-3577	Devices Installation (Second Phase)	FFC	11/25/20	12/8/20						
PRO-3577	Devices Installation (Third Phase)	FFC	12/9/20	12/19/20						
PRO-3578	Installation progress update	FFC	11/4/20	12/16/20						
	Post-Installation									
PRO-4231	Calibration & Tuning (First Phase)	FFC	11/5/20	11/27/20						
PRO-4231	Calibration & Tuning (Second Phase)	FFC	11/26/20	12/9/20						
PRO-4231	Calibration & Tuning (Third Phase)	FFC	12/10/20	12/20/20						
PRO-4233	Accuracy audit	FFC	11/5/20	12/20/20						
PRO-5234	Project review	FFC & Client	12/21/20	12/21/20						
	Data Review									
PRO-5642	Data and system performance review (First Phase)	FFC & Client	11/28/20	11/28/20						
PRO-5642	Data and system performance review (Second Phase)	FFC & Client	12/10/20	12/10/20						
PRO-5642	Data and system performance review (Third Phase)	FFC & Client	12/21/20	12/21/20						
	Project Handover									
PRO-5642	Project handover	FFC	12/22/20	12/22/20						

Sample Installation Gantt Chart

- FootfallCam adopt Scrum Project Management for all service deliveries
- Pre-installation, Installation and Post Installation Review are carried out in parallel





Case Study



Case Study #1 Yum! Brands



Yum! Brands Inc. is an American fast-food corporation with more than 50,000 restaurants including KFC, Pizza Hut, Taco Bell, and more worldwide.



Measuring restaurant speed of service

- Integration of their multichannel sales data, drive-thru data, kitchen food preparation data to FootfallCam
- FootfallCam develops custom reporting to provide meaningful data insights based on KFC's business nature:
 - Queue management report Identify the queue wait time, queue length, ordering time and order fulfilment time; to improve customer service and customer experience
 - Queue dashboard Send queueing information to a dashboard in real time to monitor and improve operational efficiency and customer service



Case Study #2 Applegreen



Applegreen is an Irish company that operates more than 250 petrol stations in Ireland, the UK and the US.



Optimising customer queue time

- Need to ensure speedy service delivery as petrol stations have high visit rate and has a smaller space for operation compared to restaurants
- Each petrol station has installed separate counters to monitor customer queue in different brands such as Burger King, Subway, Bakewell, and more.
- Store managers use queue management dashboard to monitor the customer queue time, serving time, and pickup time

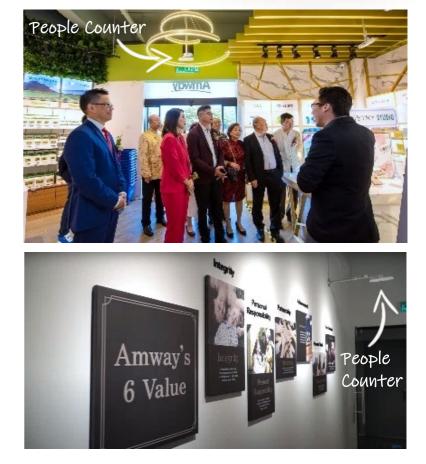


Case Study #3 Amway

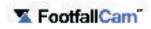
Amway is an American multi-level marketing company in more than 100 countries and territories.

Facility Utilisation and Customer Experience

- Monitor occupancy in cafeteria by avoiding overcrowding during peak hours to optimize customer experience .
- Social-distancing compliance and occupancy restriction to protect their Amway Business Owner (ABO).
- Integrate people counting data with Magic Mirror display for real-time occupancy at entrance to control incoming traffic.
- Space planning by identifying the facility usage with high flow intensity, low flow intensity, and that are most used, and least



Amway Grand Opening: <u>https://youtu.be/Bjm8Y5jRiNs</u>





Case Study #4 A.S. Watsons Group

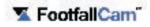
watsons

A.S Watsons is the largest pharmaceutical retailer in the APAC region and a part of the CK Hutchinson Holdings group.

Global Rollout with Multi Geo-Region Server

- Replaced their original people counting system and integrated existing data with FootfallCam software
- Provided full installation support and training to their system integrators in 24x different countries
 - Russia, Turkey, Singapore, Malaysia, Indonesia, Philippines, Thailand, Hong Kong, UK, Europe
- Watsons analyses the performance of the company as a whole, we integrated footfall data into their centralised BI system via API
- Also proceeded to upgrade their features to deploy FootfallCam's real-time monitoring system to their stores to abide to social distancing regulations.





FootfallCam Product

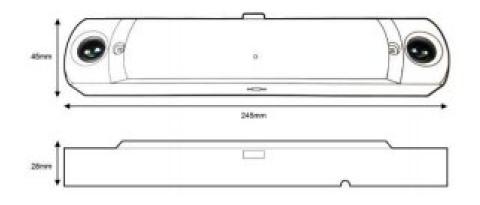


FootfallCam 3D MAX[™]



Key Features

- Using 3D Stereo Vision technology and 2D video analytics
- Highly accurate with video proof
- Suitable for wide corridors, walkway or high traffic areas
- Supports up to 25m ceiling height
- Field of view (FOV): 120°
- Proven deployment in Kentucky Fried Chicken



Camera	2x 5MP resolutions
Frame Rate	25 fps
RAM	1GB
Illumination	Minimum 1 lux
IP Rating	IP 31
Power	Power over Ethernet: 47V DC, 0.12A (6W)
Casing Material	Aluminum oxide alloy, Water and dust resistant
Total Dimensions	246 (W) x 46 (D) x 28 (H) mm

Click <u>here</u> to view Datasheet

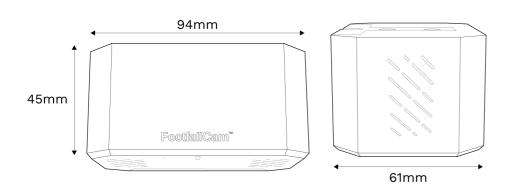


FootfallCam 3D Mini[™]



Key Features

- Anonymous ToF Counting for privacy purpose
- Single door coverage
- Work in low light or complete darkness environment
- Made in UK; Manufactured by FootfallCam



Sensor	Time-of-Flight (ToF)
Emitter	Class 1 940nm invisible laser
Field-of-View (FoV)	27°
Light Source	Class 1 940nm VCSEL
IP Rating	IP 31
Power Consumption	200mW
Enclosure	Aluminum oxide alloy, Water and dust resistant
Total Dimensions	94 (W) x 61 (D) x 45 (H) mm

Click <u>here</u> to view Datasheet

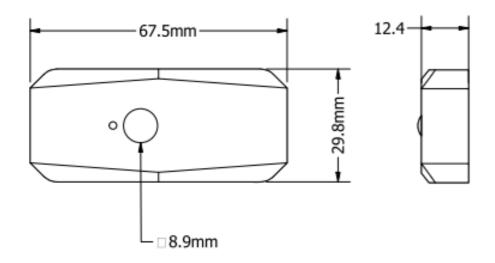


FootfallCam Utilisation Sensor[™]



Key Features

- Anonymous counting for washroom usage
- Using <u>ST Micro ToF</u> 16x16 Sensor
- Field of view (FOV): 57°
- Configurable cleaning threshold
- Automated cleaning alert via mobile application
- Proven deployment in Rentokil, Bank of America & etc.



Model	64-bit Quad-core @ 1.43GHz				
Sensor Type	Passive Infrared (PIR) + Time-of-flight (ToF)				
Detection Range	Up to 3m				
Chipset	Arm Cortex - M3 Processor				
Transmission	Type - RF (Between Utilisation Sensor and Receiver) Range - 50m radius				
Casing Material	ABS				
Total Dimensions	67.5 (W) x 12.4 (D) x 29.8 (H) mm				

Click <u>here</u> to view Datasheet



FootfallCam Analytic Manager V9™



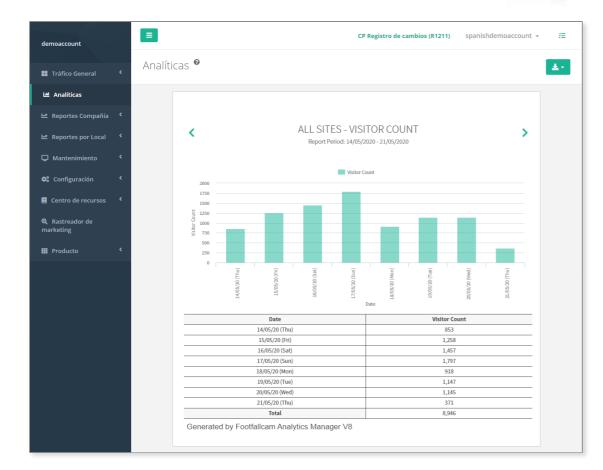
Functions:

- Staff alert if capacity limit is breached
- Centralized Management Analytics Software
- API Available for Data Integration
- Pre-defined Report Set
- Health Check Report
- User Account Management
- Automated Email Scheduler

Software Specifications				
Interface	Http; Https			
Compatible Browser	IE7 or Later Mozilla Firefox or Later Chrome Version 4.0 or Later Safari			
User Levels	2 levels: Administrator, Standard User			
Ethernet	10/100 Mb Ethernet			
Time	NTP, Adjustable time zone, automatic day light saving adjustments			
Data Delivery	TCP/IP			
Database Type	SQLite			
Report format	csv, .xml, .txt			
Data Storage	5 Years storage with auto sync			
Data Backup	Yes			
Backup Frequency	Daily Full Backup of Data and Configuration Weekly Backup to Sub Server for Contingency Purpose			
Software Version Upgrade	Auto Upgrade			



Enterprise Class Software



Multi-language Interface

Different languages available such as:

- English
- Dutch
- Spanish
- French
- Italian
- German
- Arabic
- Japanese
- Chinese

Customise dashboard design

- FootfallCam will customize the language and images in the dashboard
- Provide us with the translated text and graphics, then we will help you handle the configuration



The End

Contact Us

You need further information or have a question? Please visit:

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