Case Study

Highway Rest Stops in Taiwan
Government regulations in Taiwan mandate that all highway rest stops must display maximum capacity and visitor numbers in real time. For large public areas, air quality information must also be displayed. Accordingly, Advantech's Occupancy Monitoring Suite was deployed at rest stops to deliver accurate visitor and capacity metrics through the use of high-precision 3D cameras. With the integration of air quality sensors, air quality data could also be displayed on digital signage to provide drivers with comprehensive real-time information.

Large outlet stores in Taiwan
Advantech assisted the Outlet stores can accurately manage visitor traffic and capacity through the Counting & Occupancy Solution. Combined with rich layouts and diverse function integration with digital signage software, the solution can display in real-time a venue's current visitor occupancy numbers and the current number of allowed entries. Air quality sensor data can also be integrated to provide a venue's air quality index, providing customers a more secure and comfortable shopping space.

Product Packages

Counting & Occupancy Suite **AIO People Counting**

	Advantech Part Number
I. App	SignageCMS I. App
Counting Camera	UCAM - 130B - U01
VideoSense Edge	UBX - 310UST - G1E - C

Counting & Occupancy Suite **Video AI People Counting**

	Advantech Part Number
I. App	SignageCMS I. App
Camera	Integrating existing IP cameras (Conforming to either ONVIF Profile S or RTSP specifications)
Video AI Counting Edge	USM - 260VAC - G1E - C
VideoSense Edge	UBX - 310UST - G1E - C

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Counting & Occupancy Suite

Manage Social Distancing in the Workplace

Product Highlights

High accuracy counting	Visitor counting	Analysis and reports	Smart filters	Mobile app

Challenges in Counting & Occupancy Management

Unclear capacity limit
Has a venue reached its capacity limit? It is impossible to estimate the number of people through a manual count, resulting in blind spots when managing visitor social distancing.

Uncertain waiting time
The venue has reached its maximum capacity. How much longer do visitors have to wait? Visitors cannot be accurately predicted the waiting time, which leads to increased visitor complaints.

Leverage the existing IP camera
Do I have to purchase a visitor traffic camera? There are already many cameras installed in the venue. Do I have to purchase new cameras to calculate visitor traffic statistics?

Solution Highlights

Plug-and-play
Rapid installation with
User-friendly operating interface

Easy Implementation
3 steps for
rapid setup in 15 minutes

Intranet available
Eliminating complex
Internet enshrinement set-up

Step 1
Counting camera set up

Set up the camera in the venue

Step 2
Counting camera configuration

Set up capacity and maximum entry metrics and link to your mobile phone

Step 3
Set up VideoSense Edge

Connect the camera and set up the interactive digital signage

Product Highlights

Precise Occupancy Monitoring
The smart 3D camera analyzes entrance inflow and can effectively filter out strollers, goods, and other objects and track visitor entry and exit paths to eliminate repetitive counting and provide highly accurate occupancy monitoring.

Real-Time Overview of Visitor Numbers
Integrated with the SignageCMS digital signage platform, Advantech's Occupancy Monitoring Suite can serve as an intelligent digital signage solution with high API integration. Visitor numbers and expected wait times can be easily displayed in centralized areas for convenient management.

Estimate Average Wait Times
If the occupancy limit has been reached, the solution suite can provide automatic or manual wait time estimates, reducing unnecessary queuing for improved visitor satisfaction.
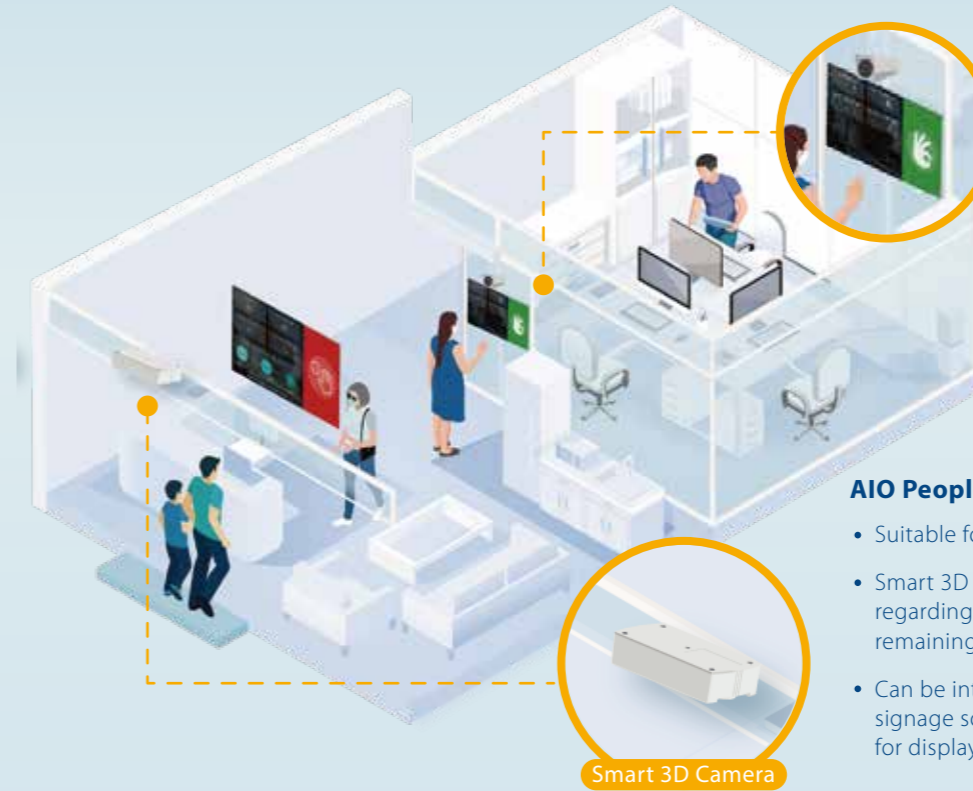
Remote Control via Mobile App
The Occupancy Monitoring Suite can be integrated with a free mobile app for remote monitoring and control from any location. Managers can use the app to set admission limits in real time and directly update safe occupancy parameters.

Solution Scenarios

Video AI People Counting
- Suitable for semi-open areas and venues without designated entrances and exits
- Transforms existing IP cameras into intelligent devices
- Can be integrated with SignageCMS digital signage software for displaying entry restrictions

AIO People Counting
- Suitable for installation at entrances and exits
- Smart 3D camera provides accurate data regarding visitor numbers for determining remaining capacity
- Can be integrated with SignageCMS digital signage software to provide a signage solution for displaying visitor information

Smart 3D Camera

Software Features

Occupancy Manager Mobile App
- Real-time current number of visitors
- Set up the visitor capacity limit
- Manually adjust for the correct capacity
- Visitor waiting mode setting: System determined/manual adjustment
- Daily occupancy and visitors chart and summary

SignageCMS of Interactive Occupancy
- Interactive zone customization allowing and prohibiting entry based on video, audio, and image displays.
- Display the visitor occupancy number in a venue
- Display the visitor occupancy limit
- Shows the number of allowed entries
- Show the expected waiting time
- Data can be integrated through additional APIs, i.e air quality data.