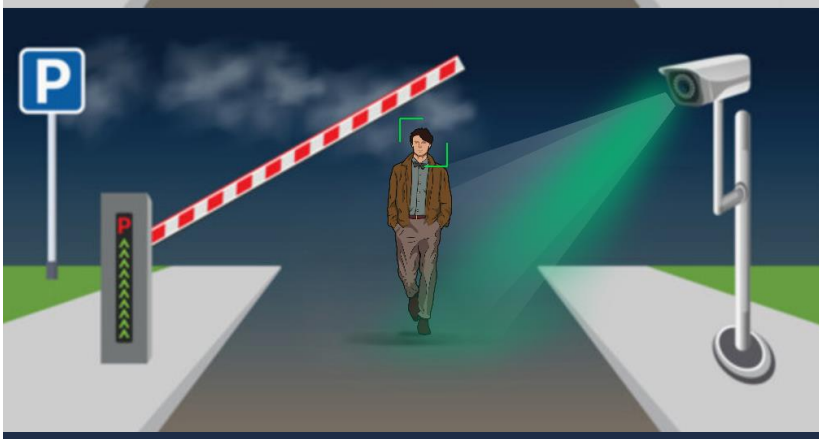
Unigen™

# UNIGEN AI SERVERS

## For Automatic Gate/Security


## The Problem

Company X manufactures and sells parking gates in the United States. Over the past few years, Company X's gates have fallen on people who were standing underneath them. These incidents can result in costly lawsuits, while also damaging a company's brand and reputation. Currently, Company X uses light beams and magnetic discovery systems to automate the gates. The problem is that this technology has been ineffective in preventing injuries to people walking under the gates. Light beams lack the ability to distinguish between cars and people. They can easily be disabled with a piece of tape or a hat placed over a pole. Magnetic discovery systems also lack the capacity to detect people.

## How It Works

Two neural networks (Yoloxx and Yoloyy) are combined to identify people and specific areas. The cameras capture the area and send the video to the Cupcake server, where the video stream is locally decoded and is then sent to the internally attached AI processing module ("Biscotti"). The AI processor places a token in a log file, which a script then uses to send an "open gate" or "all clear" signal. This signal instructs the gate to either lift and hold or close, ensuring safe interactions with pedestrians. Additionally, a 60-second video (30 seconds before and after the event) is saved to Cupcake's storage drive as proof of safe interaction.

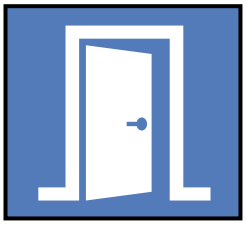
## Unigen's AI Solution


**CUPCAKE**
Edge AI Server

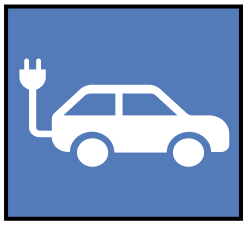
Unigen's "Cupcake" Edge AI Server employs cameras and a neural network to identify specific zones on each side of the gate. This system can accurately distinguish between cars and people, ensuring that the gate only closes when it is safe to do so.

## Additional Benefits


License Plate Reading



Ingress/Egress Tracking



ID of EVs to Offer Charging

Email : sales@unigen.com
Tel: 1-510-896-1818

# Unigen's AI Product Portfolio

## CUPCAKE
Edge AI Server

Unigen's Cupcake Edge AI Server is a robust, compact solution for Machine Learning and Inference AI. Its rugged enclosure houses versatile I/O interfaces and expansion options, facilitating seamless capture and processing of various signals.


**Key Features:**

- Rugged visual analysis at the edge
- Up to 52 tera operations per second (TOPS) in a compact edge AI server at under 20W (CPU + AI)
- Vertically integrated design and manufacturing
- SDKs, custom neural networks, cloud extensibility

## BISCOTTI
AI E1.S Module

The Biscotti E1.S uses up to 2 Hailo-8 Edge AI processors, featuring up to 26 TOPS each. The Hailo-8 neural chips designed onto the E1.S allow edge devices to run deep learning applications at full scale more efficiently, effectively, and sustainably than other AI chips and solutions.

**Key Features:**

- Up to 1600 TOPS of inference performance with air-cooled systems
- Inference for visual analysis or generative AI
- Plug-and-play and hot swappable
- Easily upgrade from a Biscotti E1.S AI module to the next generation, doubling performance instantly.

## POUNDCAKE
Air-Cooled 2U AI Server

**Key Features:**

- 8 Unigen Biscotti AI modules
- 16-core AMD Zen CPU
- 128GB DDR5 memory
- 960GB enterprise SSD
- Dual 500-watt power
- AIC MB and chassis
- Ubuntu 22.04 OS

The Poundcake Air-Cooled 2U AI Server is an ultra-efficient AI inference server boasting over 400 TOPS of performance.

Email : sales@unigen.com
Tel: 1-510-896-1818