# Safety Helmet Detection by AI-assisted Camera

## Smart Construction and IoT Systems

Edge Computer features multi-channel camera support

## Improved Protection from Safety Helmets

The importance of worker safety in the construction industry has become a prominent issue. Studies has shown that when safety helmets are properly worn, they provide shock absorption, which reduces the force transmitted to the head of the wearer upon object impact to less than 10%, thus enhancing worker safety.
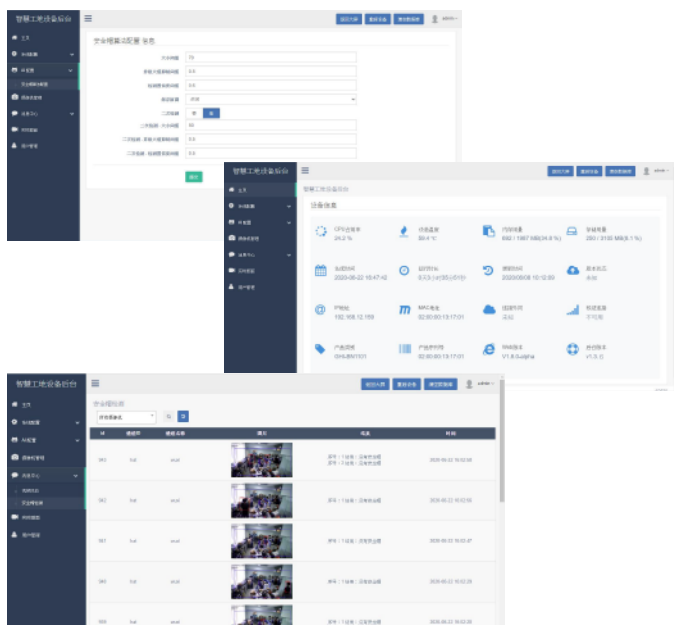
## Worker PPE Management

- Precise locationing and tracking of personnel and their protective gears.

- Real-time detection and visualization of the safety helmet wearing of each worker on a business web application.

- Overview of inspection record with timestamp and photo-history

Web-app Interfaces

## Product Features

- Human body detection algorithm based on deep learning

- Supports resumable transmission when the network is disconnected

- Low power consumption with the maximum at 8W

- Support H.265/H.264 real-time video decoding, embedded database and Web service

- In the event of a power outage, network disconnection, etc., the device can automatically restart after the power is restored

- Embedded kernel, embedded operating system without virus interference

- Aluminum alloy shell, better heat dissipation

- Remote upgrade and easy maintenance

- Convenient and simple system deployment

# AI輔助相機安全帽檢測

## 智能建築和物聯網系統

### 更好的安全頭盔防護

工人安全已成為建築行業中最受關注的議題。研究表明，正確佩戴安全頭盔後，它們可以吸收震動；在物體撞擊時，把對佩戴者頭部的衝擊力降低到小於10%，從而提高工人的安全。

### 工人防護裝備管理
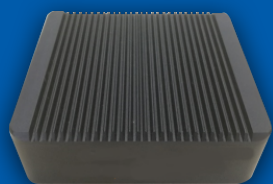
精確定位、跟縱人員及其防護裝備

在Web App上以實時畫面檢測每個工人佩戴安全頭盔的情況

提供全面檢查記錄，各項列表載有清晰時間和照片數據

### 產品特點

- 基於深度學習的人體檢測算法
- 支持斷網續傳
- 低功耗，整機最大功耗為 8W
- 支援 H.265/H.264 實時視頻解碼、內嵌數據庫與 Web服務
- 遇斷電、斷網等情況時，電源恢復後設備可自動重啟
- 嵌入式內核，內嵌操作系統無病毒干擾
- 鋁合金外殼，有助散熱
- 遠程升級，便於維護
- 簡易系統設置

## AI邊緣運算設備 AI Edge Computing Box

Front 正面 — 129 × 41.4

Side 側面 — 129 × 41.4

## 產品規格 Product Specifications

| | |
|---|---|
| CPU | ARM Cortex-A73 + Cortex-A53 |
| NPU | INT8推理算力5TOPS |
| GPU | Mali-G52 |
| Memory 記憶體 | DDR3L 2G |
| FRR 拒識率 | 0.1% |
| FAR 誤識率 | 0.0001% |
| Operation Temperature 操作溫度 | -40 C ~ 70 C |
| Power 電源 | DC12V 2A |



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