

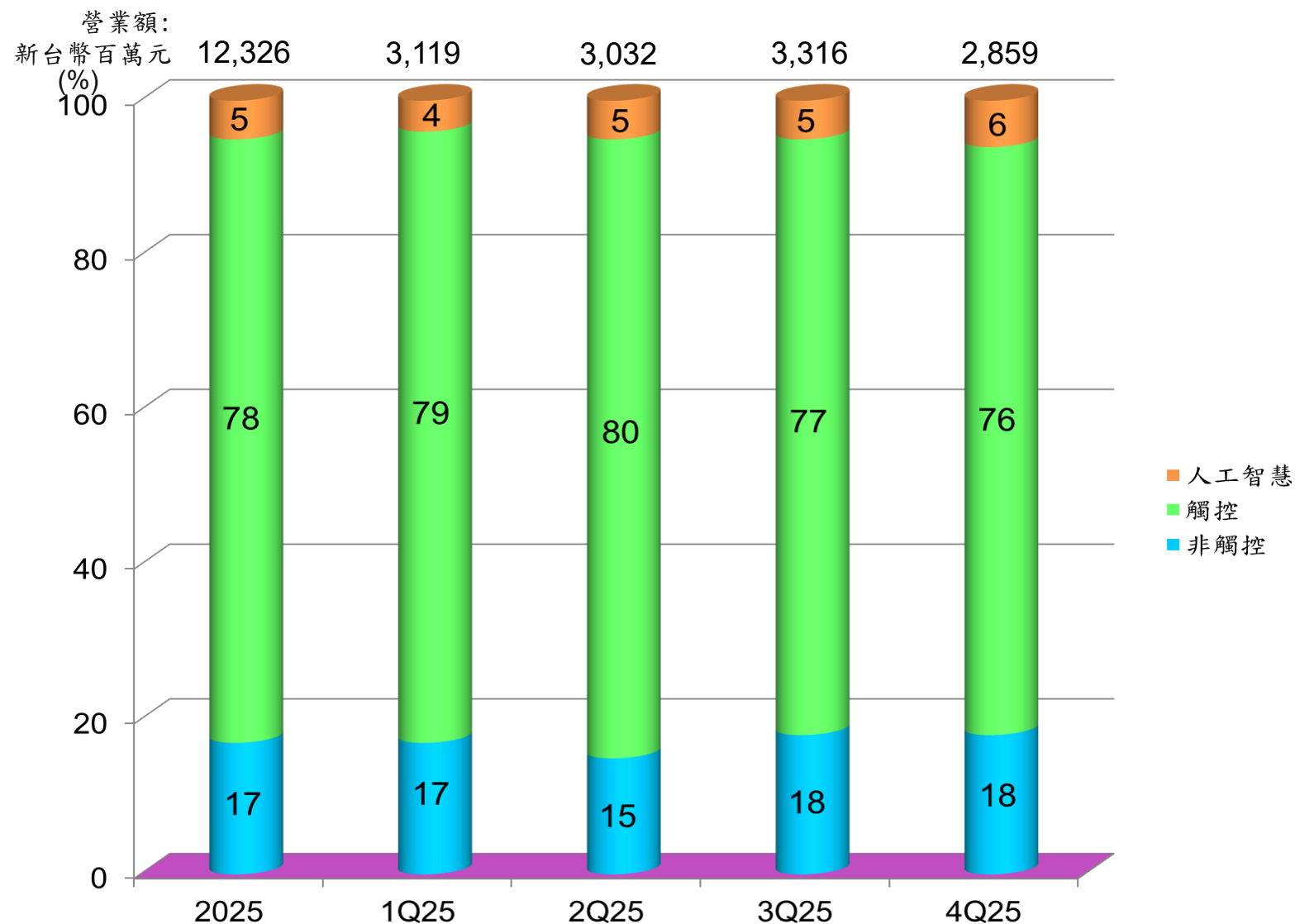


# Empowering Dual Transformation with Edge AI



ELAN Microelectronics Corporation

# 產品線業績比例 (合併營收)



- 人工智慧產品：車用ADAS、智慧交通AICCTV、AI影像辨識演算法...
- 觸控產品：觸控板,觸控螢幕晶片,生物辨識晶片
- 非觸控產品：指向裝置,微控制器&其他

# 合併損益表 - 2025年第4季 vs. 2024年第4季

單位:新台幣佰萬元

|            | 2025年第4季 | %     | 2024年第4季 | %     | YoY(%) |
|------------|----------|-------|----------|-------|--------|
| 營業收入淨額     | 2,859    | 100.0 | 3,036    | 100.0 | (5.8)  |
| 營業毛利       | 1,410    | 49.3  | 1,507    | 49.6  | (6.4)  |
| 銷售費用       | 86       | 3.0   | 88       | 2.9   |        |
| 管理費用       | 117      | 4.1   | 119      | 3.9   |        |
| 研發費用       | 546      | 19.1  | 578      | 19.0  |        |
| 營業費用       | 749      | 26.2  | 785      | 25.8  | (4.6)  |
| 營業淨利       | 661      | 23.1  | 722      | 23.8  | (8.4)  |
| 業外收入及支出    | 107      | 3.8   | 6        | 0.2   |        |
| 稅前淨利       | 768      | 26.9  | 728      | 24.0  | 5.5    |
| 稅後淨利       | 712      | 24.9  | 555      | 18.3  |        |
|            |          |       |          |       |        |
| 本期淨利歸屬於    |          |       |          |       |        |
| 母公司業主      | 735      | 25.7  | 603      | 19.9  | 21.9   |
| 非控制權益      | (23)     |       | (48)     |       |        |
|            |          |       |          |       |        |
| * 每股盈餘 (元) | 2.57     |       | 2.10     |       | 22.4   |

\* 期末發行股數: 3.04億股; 流通在外股數: 2.863億股 (2025年12月底)、2.862億股 (2024年12月底)

\* 財務資料來源: 會計師核閱

# 合併損益表 - 2025年第4季 vs. 2025年第3季

單位:新台幣佰萬元

|            | 2025年第4季 | %     | 2025年第3季 | %     | QoQ(%) |
|------------|----------|-------|----------|-------|--------|
| 營業收入淨額     | 2,859    | 100.0 | 3,316    | 100.0 | (13.8) |
| 營業毛利       | 1,410    | 49.3  | 1,566    | 47.2  | (10.0) |
| 銷售費用       | 86       | 3.0   | 93       | 2.8   |        |
| 管理費用       | 117      | 4.1   | 130      | 3.9   |        |
| 研發費用       | 546      | 19.1  | 551      | 16.6  |        |
| 營業費用       | 749      | 26.2  | 774      | 23.3  | (3.2)  |
| 營業淨利       | 661      | 23.1  | 792      | 23.9  | (16.5) |
| 業外收入及支出    | 107      | 3.8   | 151      | 4.5   |        |
| 稅前淨利       | 768      | 26.9  | 943      | 28.4  | (18.6) |
| 稅後淨利       | 712      | 24.9  | 770      | 23.2  |        |
|            |          |       |          |       |        |
| 本期淨利歸屬於    |          |       |          |       |        |
| 母公司業主      | 735      | 25.7  | 805      | 24.3  | (8.7)  |
| 非控制權益      | (23)     |       | (35)     |       |        |
|            |          |       |          |       |        |
| * 每股盈餘 (元) | 2.57     |       | 2.81     |       | (8.5)  |

\* 期末發行股數: 3.04億股; 流通在外股數: 2.863億股

\* 財務資料來源:會計師核閱

# 合併損益表 – 2025年 vs. 2024年

單位:新台幣佰萬元

|            | 2025年  | %     | 2024年  | %     | YoY(%) |
|------------|--------|-------|--------|-------|--------|
| 營業收入淨額     | 12,326 | 100.0 | 12,696 | 100.0 | (2.9)  |
| 營業毛利       | 5,996  | 48.6  | 6,204  | 48.9  | (3.4)  |
| 銷售費用       | 346    | 2.8   | 352    | 2.8   |        |
| 管理費用       | 474    | 3.9   | 501    | 4.0   |        |
| 研發費用       | 2,194  | 17.8  | 2,285  | 18.0  |        |
| 營業費用       | 3,014  | 24.5  | 3,138  | 24.8  | (4.0)  |
| 營業淨利       | 2,982  | 24.1  | 3,066  | 24.1  | (2.7)  |
| 業外收入及支出    | (132)  | (1.0) | 207    | 1.7   |        |
| 稅前淨利       | 2,850  | 23.1  | 3,273  | 25.8  | (12.9) |
| 稅後淨利       | 2,307  | 18.7  | 2,593  | 20.4  |        |
|            |        |       |        |       |        |
| 本期淨利歸屬於    |        |       |        |       |        |
| 母公司業主      | 2,442  | 19.8  | 2,736  | 21.6  | (10.7) |
| 非控制權益      | (135)  |       | (143)  |       |        |
|            |        |       |        |       |        |
| * 每股盈餘 (元) | 8.53   |       | 9.57   |       | (10.9) |

\* 期末發行股數: 3.04億股; 流通在外股數: 2.863億股 (2025年12月底)、2.862億股 (2024年12月底)

\* 財務資料來源:會計師核閱

# 2026 發展重點

## On Device AI

AI x ITS

AI x ADAS

AI x Drone

## AI x Human Interface

Hapticpad

Fingerprint

Touchscreen





## AI x ITS

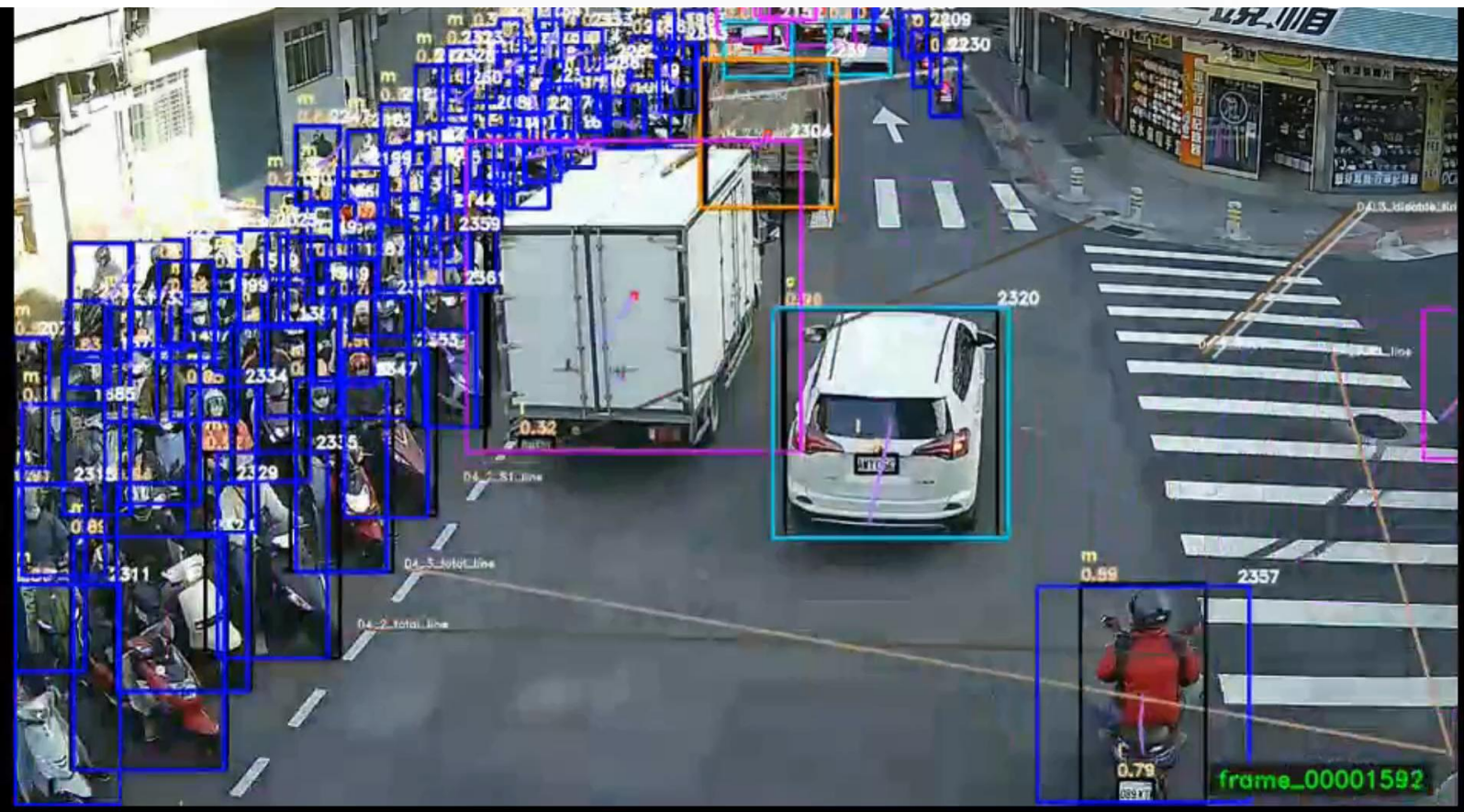
- Real-Time Mixed Traffic Flow
- AI(RL) Traffic Signal Control
- Predictive Safety System for VRUs





# 義隆 AI CCTV 即時交通資訊蒐集系統 - 提供決策交通資訊

自研 Device AI 演算法 - 即時高精準混合車流偵測



Edge Vision AI Traffic Signal Control  
邊緣端AI感知與動態號誌控制系統



# 義隆Real-Time AI CCTV 弱勢用路人即時智慧安全系統

## 安全告警 - 即時AI影像辨識，提醒行人注意來車、提醒來車注意行人

行人靠近斑馬線

\*地面燈 - 亮綠燈

\*照明燈 - 點亮開啟

\*警示牌 - 無開啟



斑馬線上有行人通行時，且有車輛靠近時

\*地面燈 - 亮黃燈

\*照明燈 - 點亮開啟

\*警示牌 - 點亮開啟

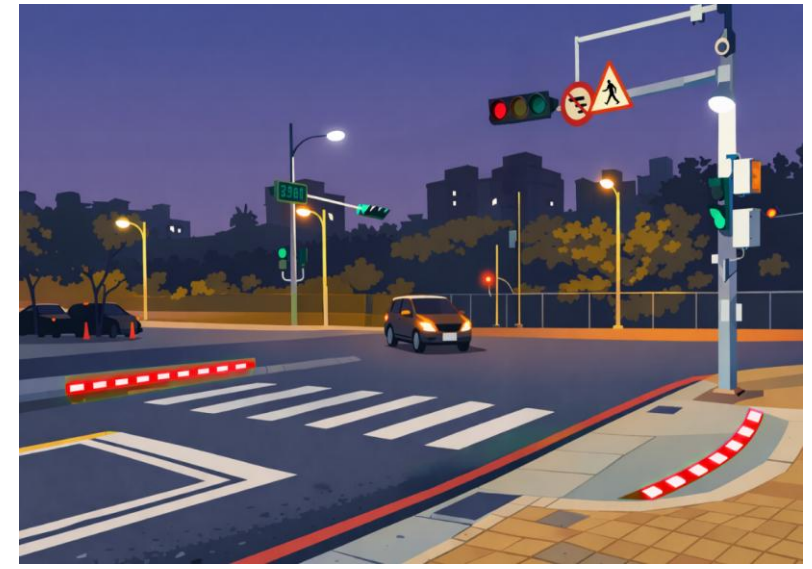


斑馬線上無行人通行，只有車輛行駛

\*地面燈 - 亮紅燈

\*照明燈 - 無開啟

\*警示牌 - 無開啟



賴總統宣示 2050 人行道  
0 死亡擺脫行人地獄



Edge-based Pedestrian  
AI Safety System  
邊緣端行人AI安全保護系統





# 義隆在全球首創 AI 監視器評比中榮獲最高評等

日間晴天 日間雨天 夜間晴天 夜間雨天

## 頂尖 AI 偵測準確度

車輛偵測

F1 Score  
0.9302

行人偵測

F1 Score  
0.9238

轉向量偵測：95.29%

停等車輛數偵測96.68%

## 工業級環境耐受力



**IP67**  
防水防塵等級



運作溫度：  
-20°C 至 +60°C

嚴苛環境穩定運作

**99.0** /100  
綜合評分

在嚴格的測試標準下，獲得近乎滿分的卓越評價。



功耗

**5.88W**

實測功耗

10/10

能源效率高，低於 7W 標準，  
獲得 10/10 滿分。

## 絕佳的系統效能與穩定性



✓ 即時偵測 (滿分)



✓ 功耗控制 (滿分)



✓ 穩定性 (滿分)



✓ 資料格式 (滿分)



偵測即時性

**34.67ms**

平均延遲

15/15

反應速度極快，獲得 15/15  
滿分評價。



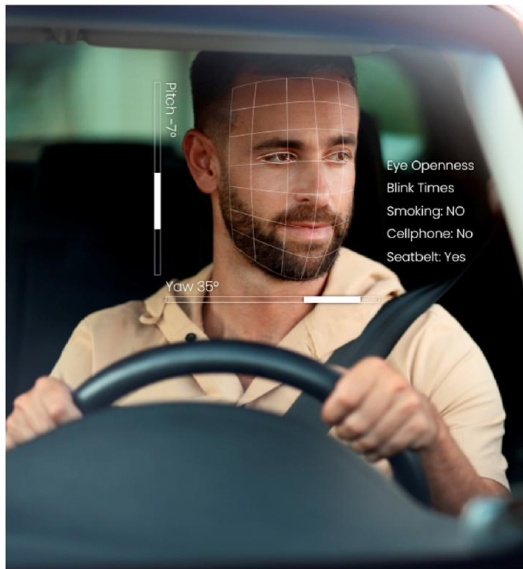
## AI x ADAS

- ADAS L2 (LKA/LFS/ESF/ACC/AEB/BSIS)
- Mini-LED Local Dimming for E-mirror
- Smart Glass for Sunroof





# 義隆ADAS – DMS 解決方案



DMS

## Our Function

 Eye Closing Frequency

 Yawn Detection

 Distraction Detection

 Smoking Detection

 Using Cellphone Detection

 Head Precision Detection

 Gaze Estimation

 Attitude Abnormal Detection

 Seat Belt Detection

## Multi-tasks in Unify Model

Yaw **Red**: 轉頭 / Pitch **Green**: 抬頭低頭



# ELAN 盲點偵測系統 (BSIS) Inner Wheel off-tracking



台灣精品  
2022



Fisheye Camera  
With AI  
@ 1TOPS





# 義隆在全球首創 UN R151+ 評比中榮獲最高評等



## 97.4分

實測分數

關鍵效能實測數據

AI 物件偵測準確度  
**F1 = 0.9373**

高度精準辨識弱勢用路人，  
確保主動安全基礎



系統功耗僅 **3.96W**

符合車規設計，不對車用  
電力系統造成額外負擔

全方位評測框架



5大類、12項  
專業測試

針對AI盲區警示系統進行  
滴水不漏的全面性評估



超越國際標準的  
UN R151+

強化對台灣常見場景(如近  
乎靜止的行人/自行車/摩托  
車)的偵測能力



挑戰台灣多樣化  
道路環境

測試涵蓋日夜晴雨  
四種驗測天候場景



夜間情境

正確發報率  
**96%**

錯誤發報率  
**5%**



雨天情境

正確發報率  
**94%**

錯誤發報率  
**5%**



正確發報率  
**100%**

錯誤發報率  
**5%**



# 應用於電動巴士與物流車輛的 AI 輔助駕駛系統 (ADAS) Level 1/2+



## Enhanced Lane Assistance Navigator 3.0 電動巴士AI緊急轉向防護系統



Lane Following System (LFS)



Emergency Steering Function (ESF)



Electric Bus



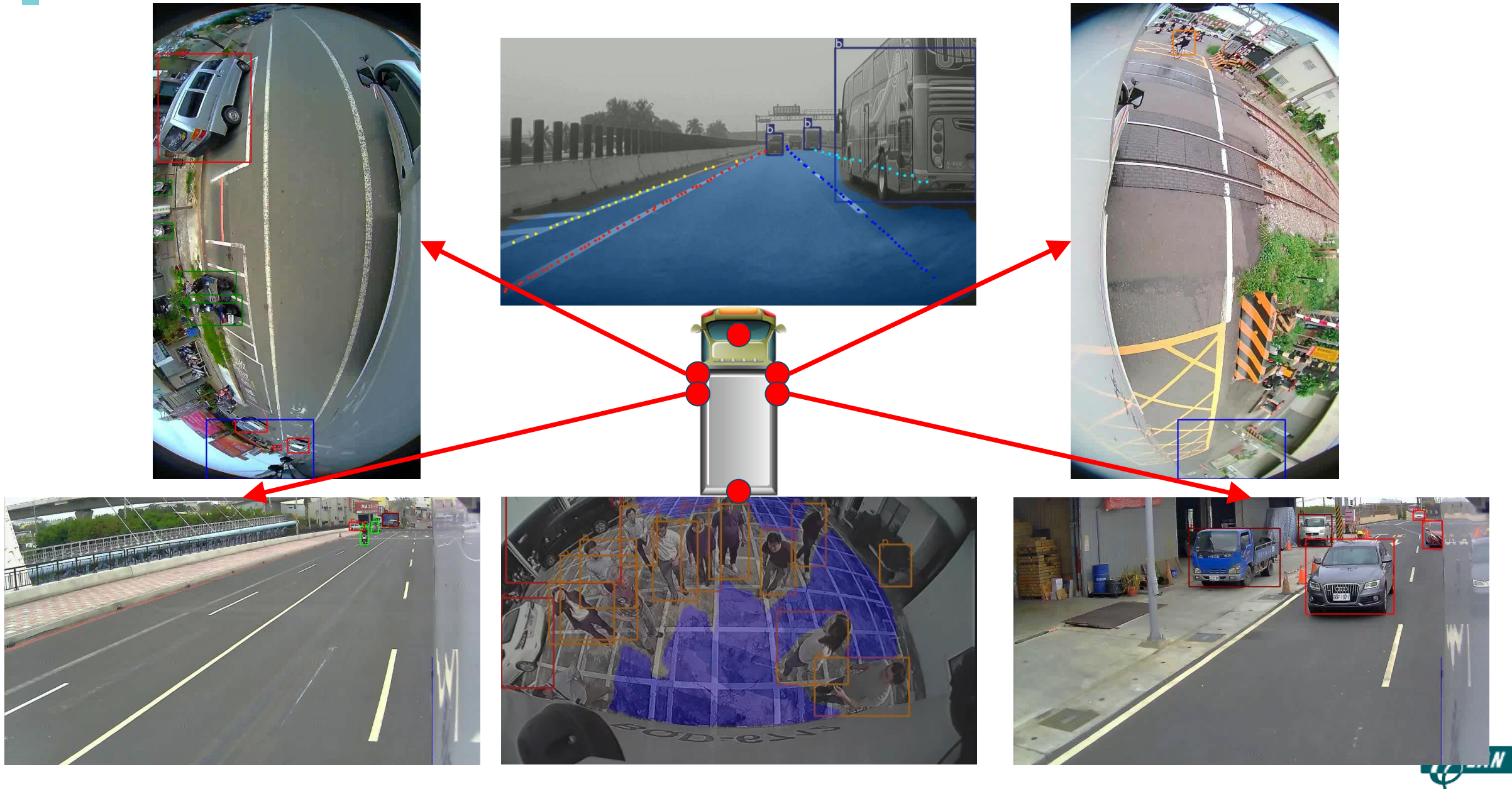
Agricultural Vehicle



Industrial Vehicle



# ADAS Level 2+ 攝影感知系統



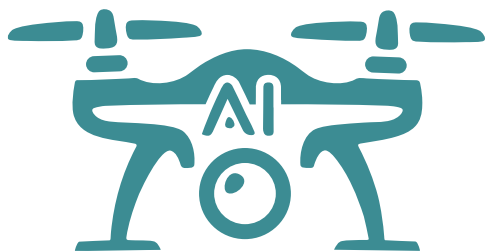




## AI x Drone



- AI Target Tracking & 360° Obstacle Avoidance
- Mini-LED Local Dimming for Console Panel
- ISP for Gimbal Camera





# 邊緣AI – 無人機影像辨識技術

中研院 × 義隆電子聯手研發



## YOLO v4 v7 v9 AI-Generated Augmented Training Data



- Simulates Weather
- Simulates Military Scenarios
- Smarter Model Training

## Target Detection & Tracking



- Accurate Target Lock
- Higher Mission Efficiency

## 360° Obstacle Avoidance



- Intelligent Navigation
- Autonomous Route Planning

# 多旋翼無人機 Skydio X10 避障/雲台與 ELAN的比較

## Skydio X10

NVIDIA Jetson Orin (275 TOPS)  
**Obstacle Avoidance**

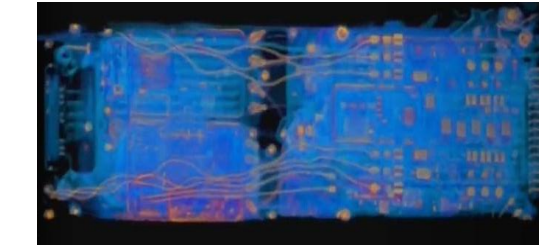


6 Cameras

Qualcomm QRB5165 (15 TOPS)  
**Gimbal**

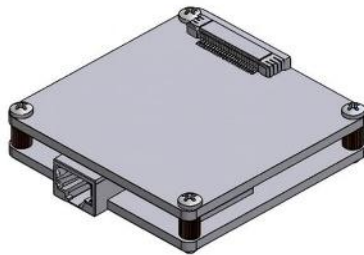


3 Cameras



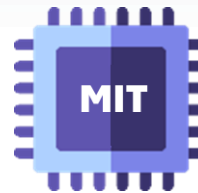
PCB Size –  
3505 x 1651 x 1194 mm

**Obstacle Avoidance** (8 TOPS)

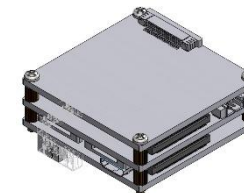


PCB Size - 60 x 57 x 2 Pcs

## ELAN Solution



**Gimbal** (2 TOPS)



PCB Size - 38 x 38 x 3 Pcs

# 義隆無人機解決方案核心優勢

Smaller. Lighter. Farther. Smarter.



**Power Saving**

省電節能



**Compact Size**

體積更小



**Ultra-Lightweight**

極致輕量



**Lower Cost**

成本更低



**Extended Flight Range**

飛得更遠



# 義隆Mini LED Local Dimming及智慧觸控在控制台之應用

High Contrast and Power Efficiency for Drones in Outdoor Light

## Mini-LED Local Dimming



**>4000nits**  
High Brightness



**>20000:1**  
High Contrast



**>600**  
HDR



**Power Saving**  
Extended Battery Life

## ELAN AI × Touchscreen



**Glove Touch**  
Cotton / Thick Glove ✓



**Waterproof**  
Rain / Seawater / Outdoor ✓



**Frozen Touch**  
Extreme Weather / Frost ✓



ELAN Mini-LED Local Dimming



# 影像處理晶片 ISP 在無人機之應用

## Blade Series: BL01 CVBS camera



1. size 19x19
2. HFOV 110 deg, F1.0 great night vision
3. HDR>100 db
4. Weight : 10.2g
5. CVBS Out



Day - HDR Backlight Compensation



Night - Starlight Night Vision

## Wide View Angle Correction & HDR(High Dynamic Range)

Competitor



ELAN Group (Avisonic)



### ELAN Features

- [1] Wide horizontal field of view, 150 degrees
- [2] Lens distortion correction, low image deformation
- [3] Low noise in analog output image, minimal color rendering errors of objects in the frame
- [4] High recognition capability in dark areas
- [5] Full-color at night, low noise under low-light conditions



# AI x Human Interface

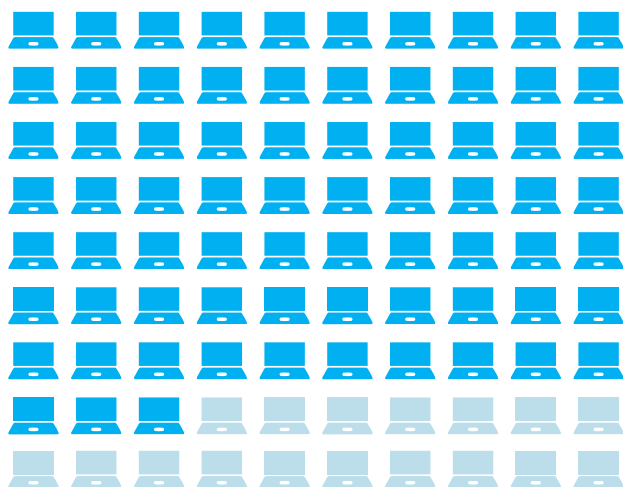




# 義隆在CES展的產品滲透率

Overall: 80% (66/83) – Any ELAN Solution

66/83



80%

Touchpad

61%

51/83

Touchscreen

56%

36/64

Fingerprint

57%

25/44

- Touchpad: Applicable Base = 83
- Touchscreen: Applicable Base = 64
- Fingerprint: Applicable Base = 44



# 義隆在CES展的產品滲透率

ASUS, ROG, Acer, MSI, LG



Zenbook A14



ProArt PZ14



ProArt GoPro Edition PX13



ROG Zephyrus Duo (GX651)



ROG Zephyrus G14 (2026)



ROG Zephyrus G14 (2026)



Swift 14 AI



Swift 14 AI



Swift 16 AI



Swift Go 14 AI



Nitro V 16 AI



Aspire 14/16 AI



Raider 16 Max HX



Prestige 14 Flip



Prestige 16 Flip



LG gram Pro 16



LG gram Pro 17



# 義隆在CES展的產品滲透率

HP, Dell, Lenovo



OmniBook Ultra 14



OmniBook Ultra Flip 14



OmniBook X 16 / 17



OmniBook X Flip 14 / 16



OmniBook 7 (16")



OmniBook 5 (14"/"16")



OmniBook 5 Flip 14



OmniBook 3  
(14"/"16"/"17.3")



Chromebook Plus x360



Chromebook x360



EliteBook X G2a



EliteBook X Flip G2i



EliteBook X G2q



HyperX OMEN MAX 16



HyperX OMEN 16



HyperX OMEN 15



EliteBook X G2i



XPS 16



XPS 14



XPS 13



Alienware Ultra-Slim



Alienware Entry-Level



Yoga 7a 2-in-1



Yoga Pro 9i



Yoga Pro 7i



Yoga Slim 7x/7a



IdeaPad Pro 5i



IdeaPad 5x/5a 2-in-1



IdeaPad Slim 5x



ThinkPad X1  
Carbon Gen 14 Aura



ThinkBook 14 G9/G8+



ThinkBook 16/16P G9

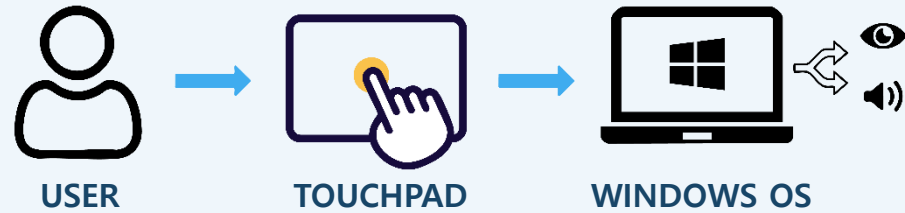




# 觸動每一次操作：Windows × Haptic Plus

Evolution of Interaction: From One-Way to Two-Way

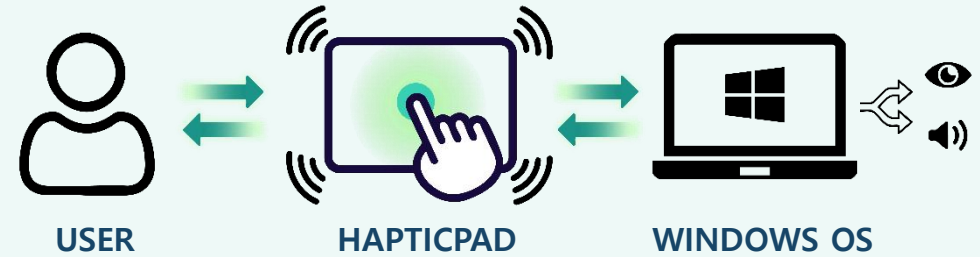
## Current



## ONE WAY INPUT BRIDGE

One-way Communication Only.

## Next

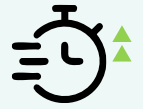


## ACTIVE HAPTIC INTERFACE

OS Instructs Physical Feedback.



INTUITIVE



EFFICIENT

TRANSFORMATION

# 指紋辨識應用在穿戴裝置

Your Fingerprint, Your Key to Everything



## Versatile Use Cases

### Business & Productivity

- Presentation Controller
- Navigate slides on **PC or Smartphones**

### Entertainment & Gaming

- Gesture-Based Media Control
- AR/VR Interaction
- Biometric Login for Gaming

## Mechanical Designs



**OD Size: 1 cm<sup>2</sup>**  
Small Space For Organization



**Customization Options & Material Stacking**

## Biometric Recognition

  
**Stronger Security**

Microsoft ESS Approval with  
**ELAN Fingerprint**  
  **+ ESS**

  
**Payment Support**



Biometrics Security



Biometric component



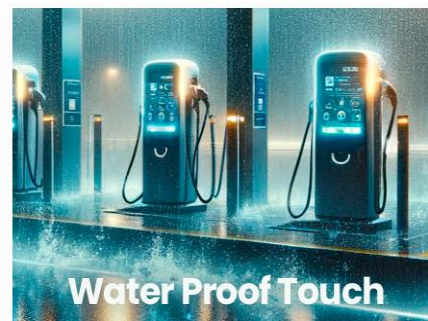
Biometric performance  
Biometric Sensor on card  
(BSOC) / QM / CSI



Visa innovation card

# 義隆戶外觸控解決方案

## New Solution for Raining Water Touch, Glove Touch and Salt-water Touch





## I) On-Device AI Driving New Business Growth

### 1. Drones

- Proprietary AI algorithms enable high performance and long battery life with low power, low cost & compact design.
- Mini LED local dimming enhancing visual quality while improving power efficiency
- ISP for high quality image

### 2. ADAS

- ADAS Level 2 Solutions w/LKA/LFS/ESF/ACC/AEB/BSIS for safer mobility
- ELAN DMS Solution x Smart Cockpit promotes road safety

### 3. AI CCTV for ITS

- Real Time Traffic Signal Control
- Unsignalized Intersections, Red-Light Running, and Life/Safety Systems for Vulnerable Road Users

## II) Extend Touch Applications – A Core Growth Engine

### 1. Haptic – Smart Touchpad

- Rising demand for human-machine interaction is driving strong adoption of haptic feedback
- HapticPad achieves multi-times ASP growth over the traditional clickpad

### 2. Smart Fingerprint Recognition - Wearable

- Navigation supports Copilot Key, AR glasses, and diverse new applications

### 3. Smart Touchscreen - IPC

- New Applications for Raining Water Touch, Glove Touch & Salt-water Touch in IPC, e.g. marine, medical, military...



# Creating the Future with AI

## Building Sustainability with ESG

**ELAN MICROELECTRONICS**

