



# 義隆 Smart-Input™ Solutions

Dual Transformation through AI

藉由AI實現企業轉型

2024/09/04

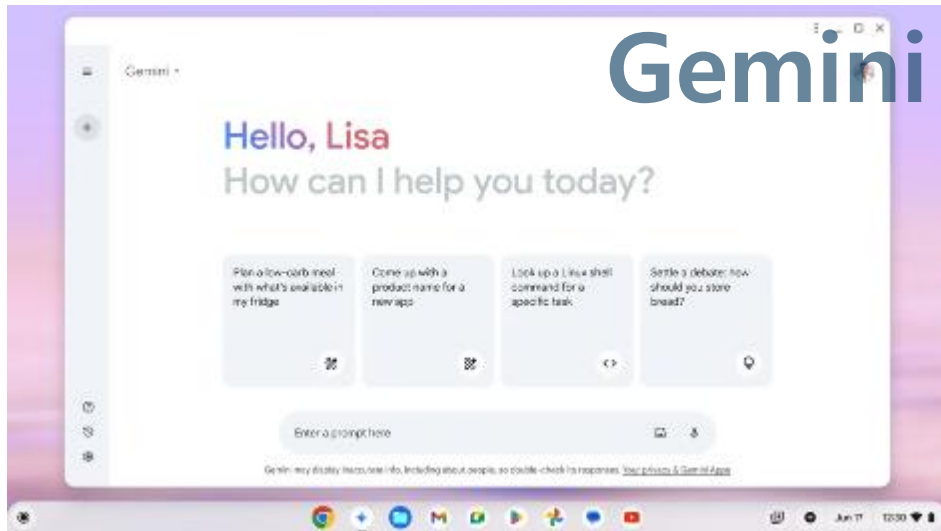
宏遠證券2024未來趨勢產業投資論壇



ELAN Microelectronics Corporation

# Google新產品Chromebook Plus 搭載AI功能

## Google Chromebook Plus



Chromebook CM30 Detachable



Chromebook Plus Spin 714



Chromebook Plus CX34



Chromebook 14 inch

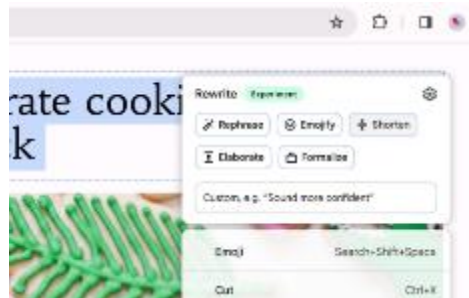


ASUS Chromebook Plus 514



HP Chromebook Plus x360

### AI Writing Tool



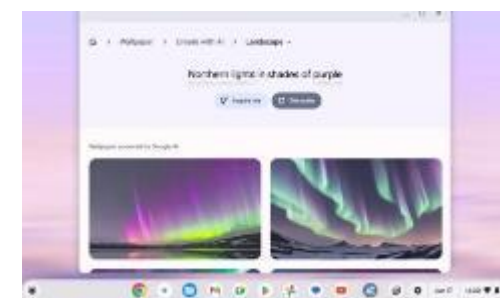
### AI Magic Editor



### Gemini Workspace



### AI Wallpaper Generate



# AI PC 是當今市場最熱門的話題

CES 2024 發表 55 款以上 AI PC，義隆佔 90%



XPS 16  
XPS 14  
XPS 13



ALIENWARE m16 R2  
ALIENWARE x16 R2



OMEN 14



OMEN 16



OMEN 14



OMEN 16



Lenovo Yoga Book 9i (13", 9)



Legion 9i Gen 9 (16" Intel)



Legion 7i Gen 9 (16" Intel)



ThinkBook Plus G5 Hybrid



ThinkBook 13x Gen 4 (13" Intel) & Thinkbook 13x Gen 4 E-Ink Prism (POC)



Zenbook Duo



Zenbook 14



Vivobook S 14 OLED



ExpertBook B9 OLED



Zephyrus G14



Aspire Vero 16



Aspire 3D 15 SpatialLabs™



Swift Go 16



Swift Go 14



Swift X 14

# 市調機構對全球筆記型電腦出貨量的預測

Unit in million

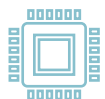
|       | 2023     | 2024     |             | 2025     |             | 2026     |             |
|-------|----------|----------|-------------|----------|-------------|----------|-------------|
|       | Shipment | Shipment | YoY Growth% | Shipment | YoY Growth% | Shipment | YoY Growth% |
| DTPC  | 62.4     | 63.3     | 1.4%        | 66.2     | 4.6%        | 67.1     | 1.4%        |
| NBPC  | 179.9    | 184.9    | 2.8%        | 201.7    | 9.1%        | 212.1    | 5.2%        |
| Total | 242.3    | 248.2    | 2.4%        | 267.9    | 7.9%        | 279.2    | 4.2%        |



Windows 10宣布4Q25停止更新及COVID-19期間購買的NB已使用六年，將有利於NB換機潮的發生



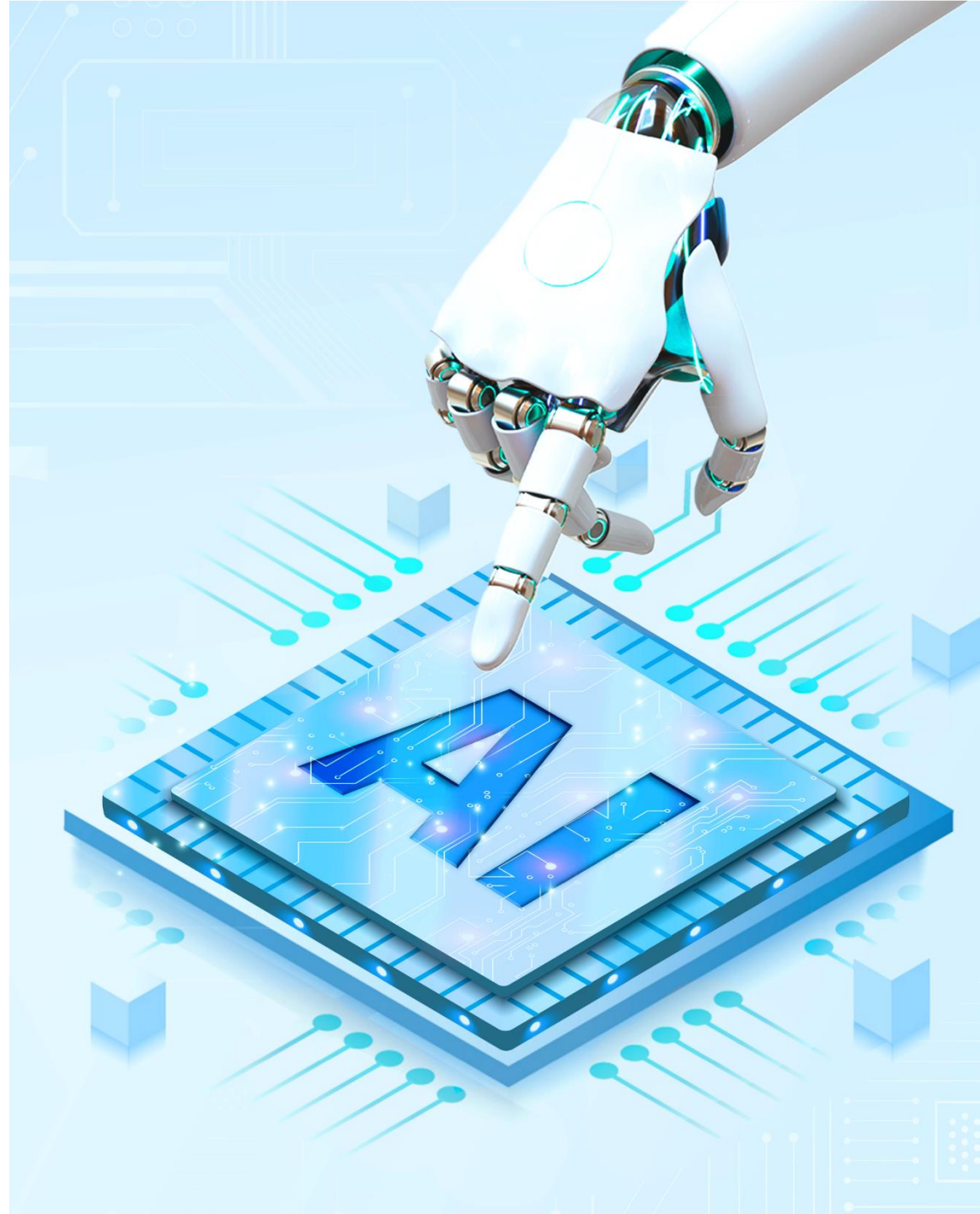
AI PCs及Windows系統更新將有助於推動新需求。



AI軟硬體功能的結合，是決定AI PCs未來成長潛力的關鍵。



我們已掌握 AI PC 的趨勢  
將產品AI化



# 邊緣運算展現在人工智慧的最佳效能

- **Faster Response Time**

Immediate processing reduces latency

- **Cost**

Decreases data transmission and storage costs

- **Hardware Utilization**

Optimizes hardware resources

- **Privacy & Security**

Local data processing enhances security

- **Offline Functionality**

Operates without internet connectivity

- **Efficiency**

Streamlines operations and reduces energy usage

- **Hyper-Personalization**

Tailors experiences to individual users

- **Environmental Impact (ESG)**

Reduces the carbon footprint of data centers

# AI高效能之觸控板模組

# #1

Touchpad Market

# Smart-Usability<sup>TM</sup>

Best In-Class Palm Prevention

# 100<sup>+</sup>

MP Projects / YR

AI Enabled

Palm Rejection  
Gesture  
Noise Immunity  
Moisture Proof

## Touchpad

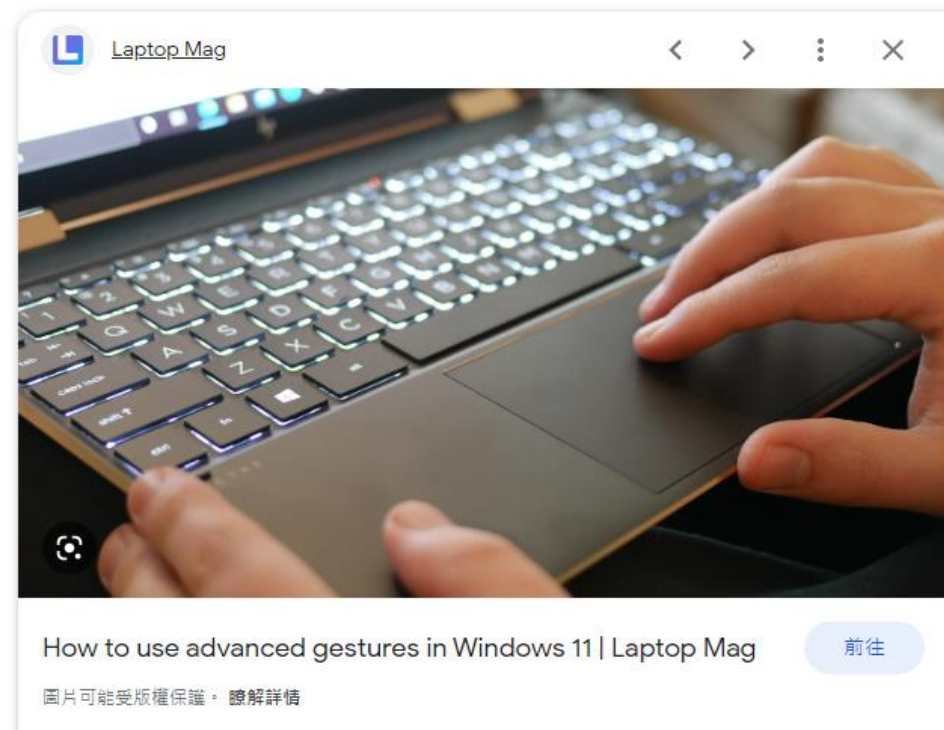
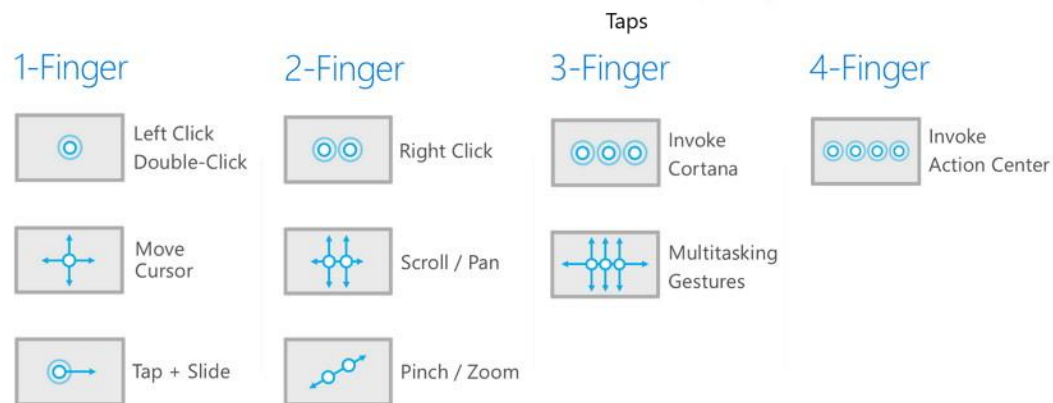
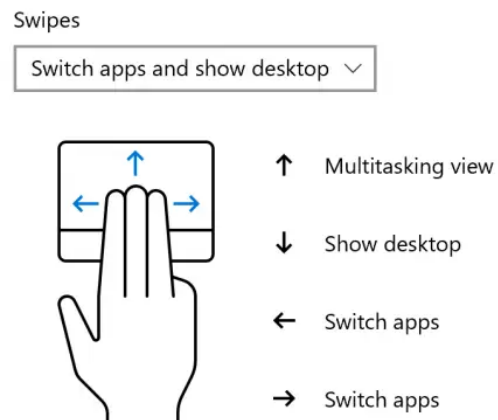
# 50%+

Market Share



# Windows 11 多指觸控驅動大尺寸觸控板成為市場主流

## Windows 11 Multi-Finger Gesture



Source: Laptop Mag

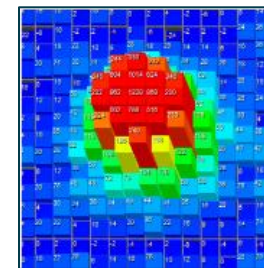
# 觸控板明顯朝大尺寸面積發展趨勢演進



Expansion of Palm Contact Area



## ELAN AI×Touchpad



**Self/Mutual Hybrid Sensing**  
for Best In-Class 3D Images



**Keep Best Palm Rejection Performance**  
With Automatic Multi-Testing

- Two Palm Tapping / Moving / Swiping



**Low Accidental Touch Rate**  
as Normal Size Touchpad

# Google, Microsoft 推出無障礙功能



Global Accessibility Awareness Day



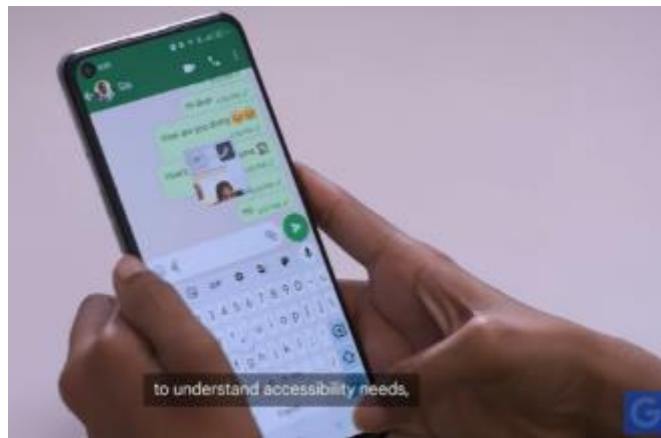
Eye Tracking



Music Haptic



Project Gameface



Proteus Controller



# 義隆與知名美商大廠合作 推出無障礙模式的觸控板

ELAN是第一個支援Eco-system無障礙模式的供應商

- To support friendly operation environment for person with a disability



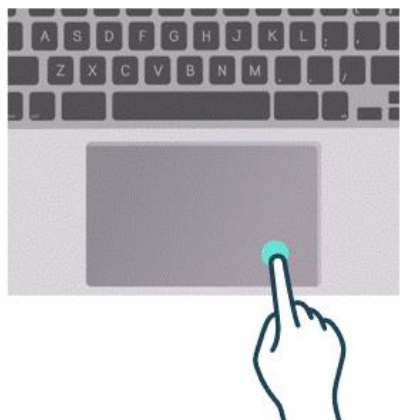
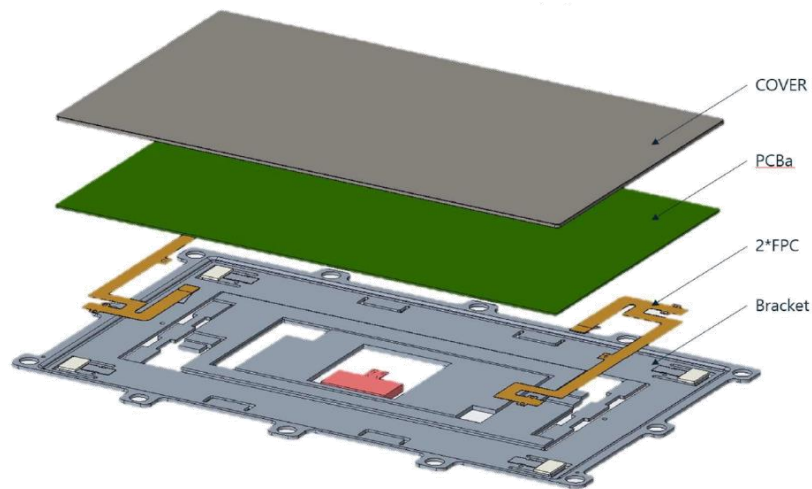
The new adaptive touchmode in Surface Laptop Studio 2



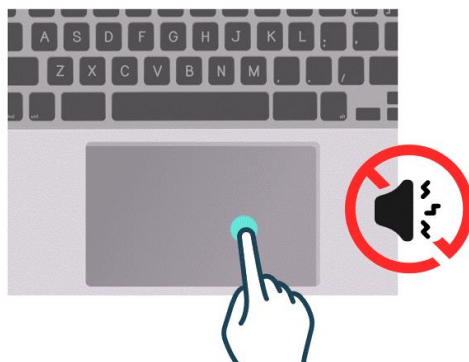
<https://www.youtube.com/watch?v=fKtBCqZ6ZfE>

# 帶有AI功能之觸覺回饋觸控板的特色與優勢

## Gen2 (Premium)

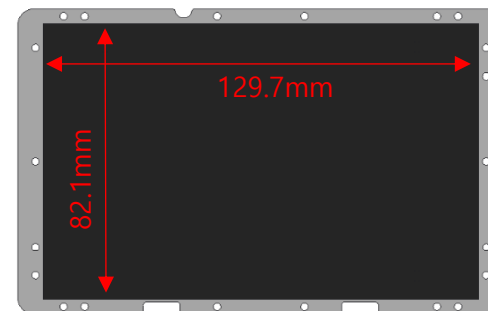


**All-Zone  
Clickable**

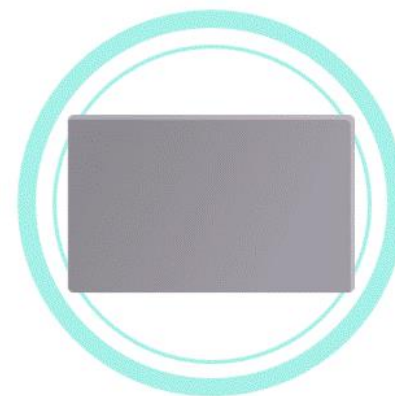
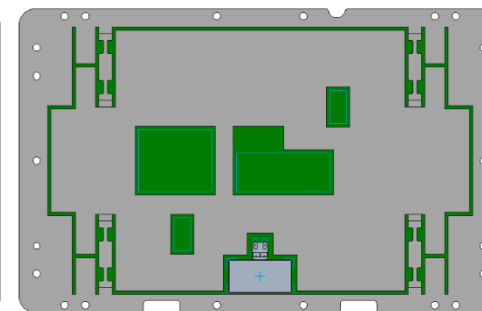


**Silent  
Click Sound**

## Top View



## Bottom View



**Different  
Haptic Performs**



**Gesture  
Control**

© 2023 LAN

# 搭載AI之觸覺回饋觸控板解決方案已陸續上市

hp



Dragonfly Chromebook  
ELAN Gen 1 HapticPad

Lenovo



Lenovo Z13  
Piezo Solution

Lenovo



Lenovo Z16  
Piezo Solution

DELL



Dell XPS 13 Plus  
Piezo Solution

hp

Windows



HP Dragonfly Pro  
ELAN Gen 2 HapticPad

hp

Chrome OS



HP Dragonfly Pro  
ELAN Gen 2 HapticPad

ASUS



ProArt Studiobook H7604  
ELAN Gen 2 HapticPad

12+ Projects  
On-going

2024

# 帶筆觸控板/震感觸控板應用領域



## 應用領域



教育領域  
電子筆記  
教科書筆記  
白板



創意領域  
繪畫  
設計  
影音編輯  
3D建模



商務領域  
簽名  
筆記  
白板  
精細點選

# 具競爭力的AI觸控螢幕晶片

# #1

Touch IC Market

# 10 – 18"

Support Size

Development with  
Stylus Manufactures

MAXEYE

Wacom®

SUNWODA

Hanvon

Chicony

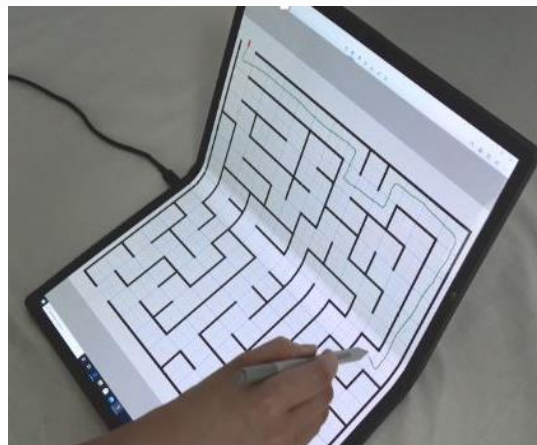
AI Enabled

Pen Track Prediction  
Palm Rejection  
Power Saving  
Gesture Recognition  
Moisture Proof

Touchscreen

# 50%+

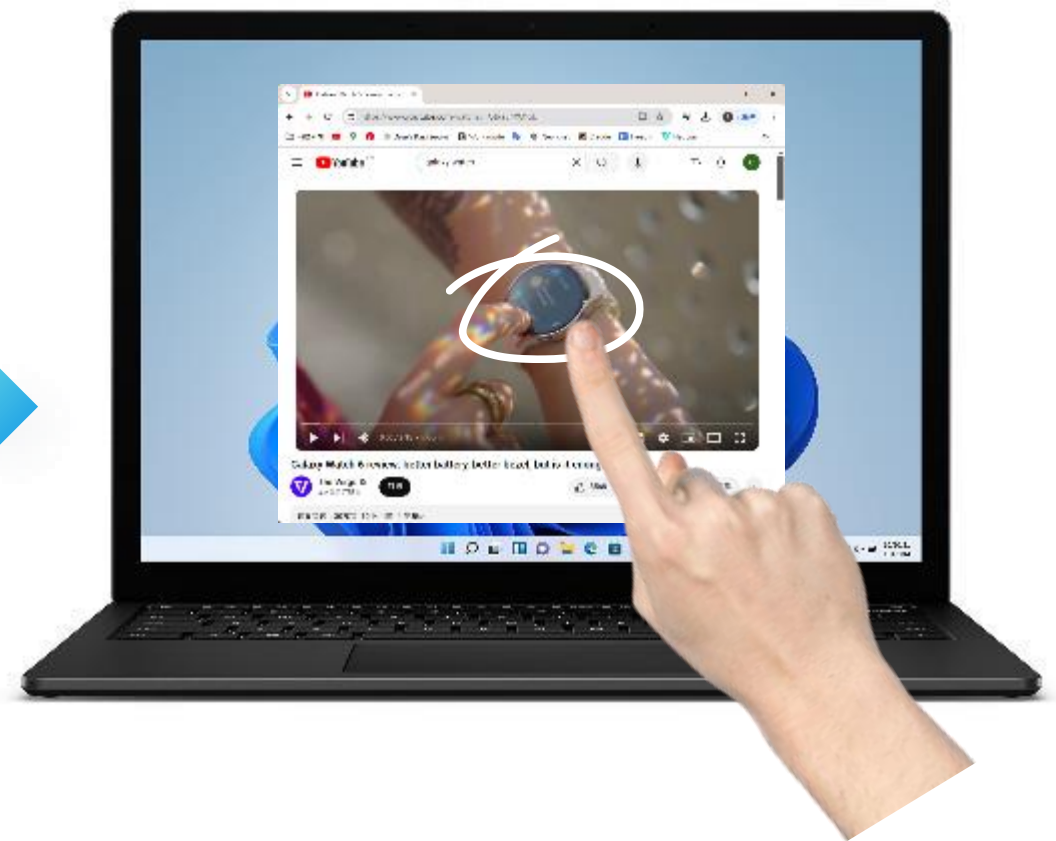
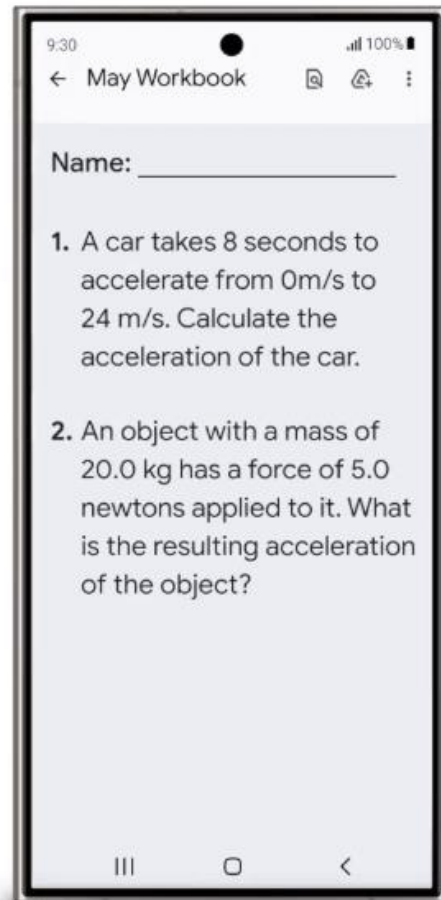
Market Share



# 畫圈搜尋:手機端AI搜尋功能衍生應用

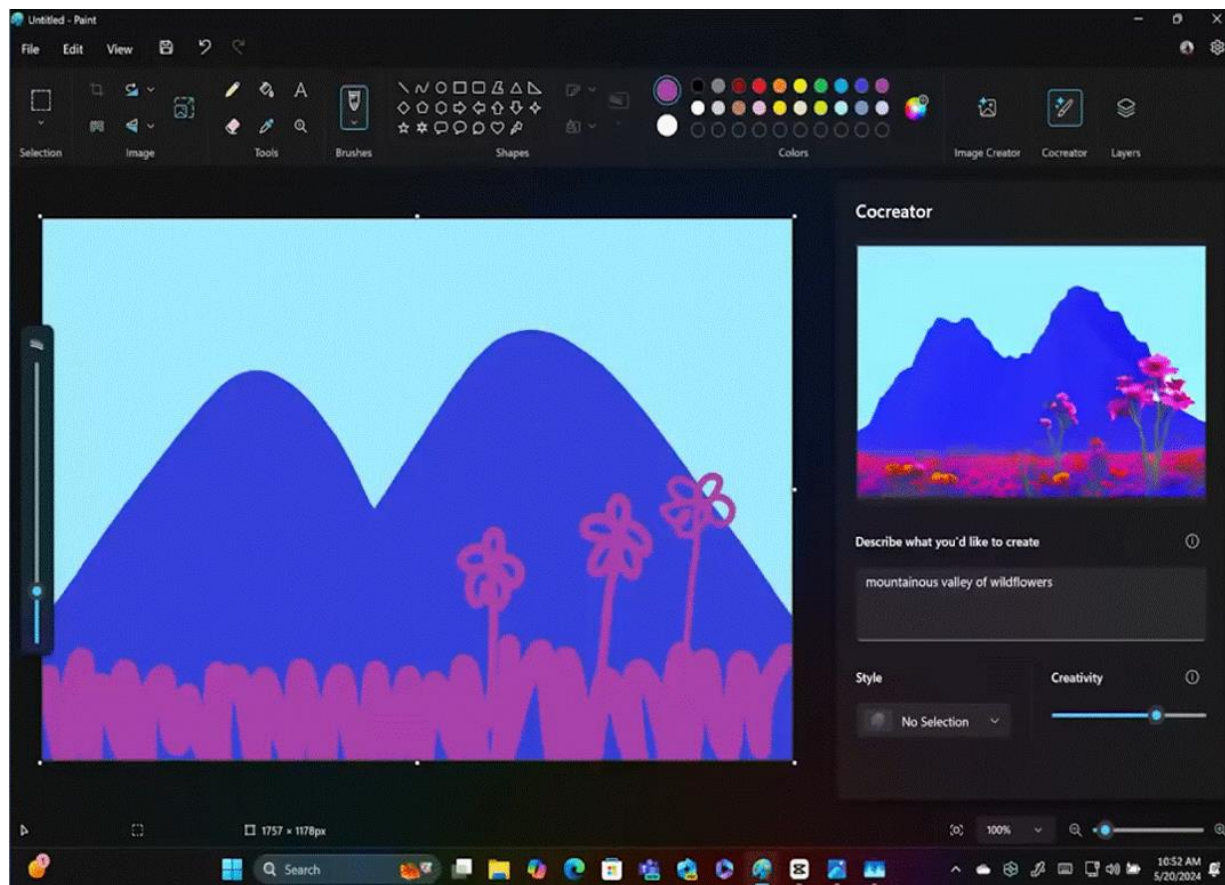
Google Circle to Search

Touchscreen Penetration Rate Increasing!



# Microsoft Paint Cocreator New Function- AI影像建立 隨心所欲

## With ELAN 帶筆觸控板方案



<https://www.youtube.com/watch?v=aZbHd4suAnQ&t=3380s>



Pen on Touchscreen can help  
Cocreator work effectively.

Support

MPP

AES

Developing

USI



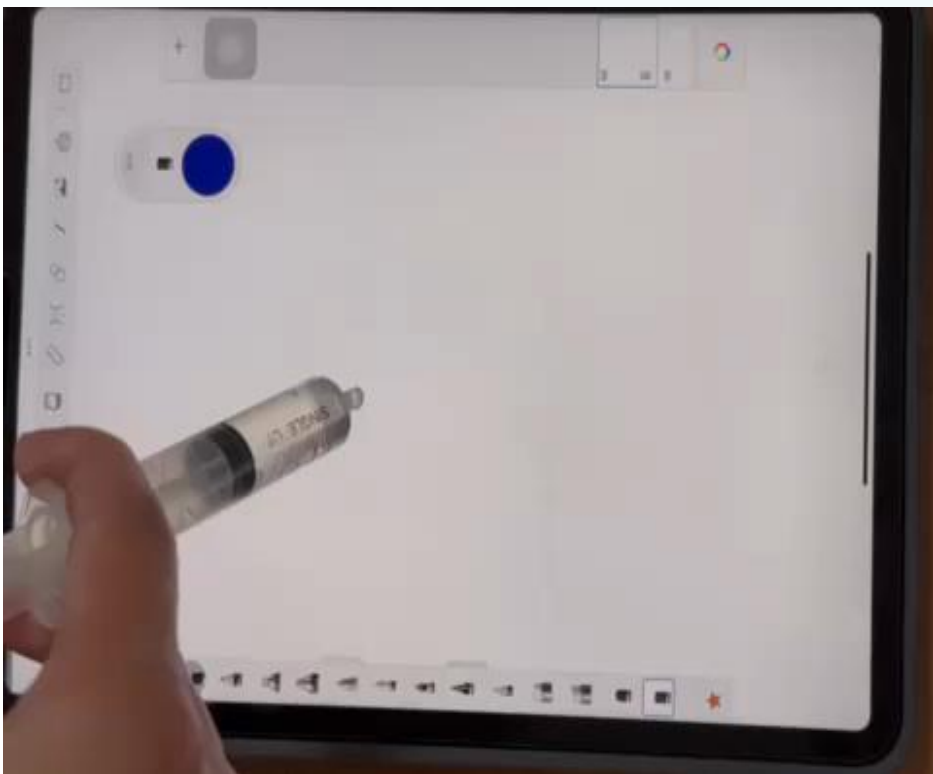
## AI 使觸控筆具低延遲、低耗電等功能



AI Prediction

# AI防水功能 展現明顯差異

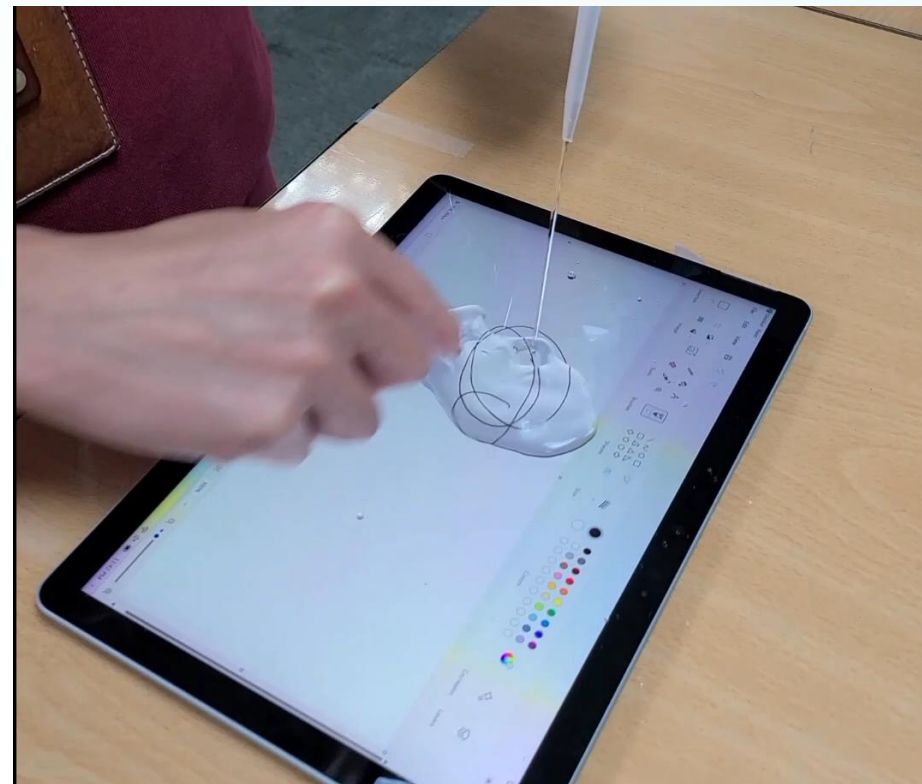
w/o AI Moisture Proof



iPad Pro-11

Test Condition : Water 5 mL

w/ AI Moisture Proof

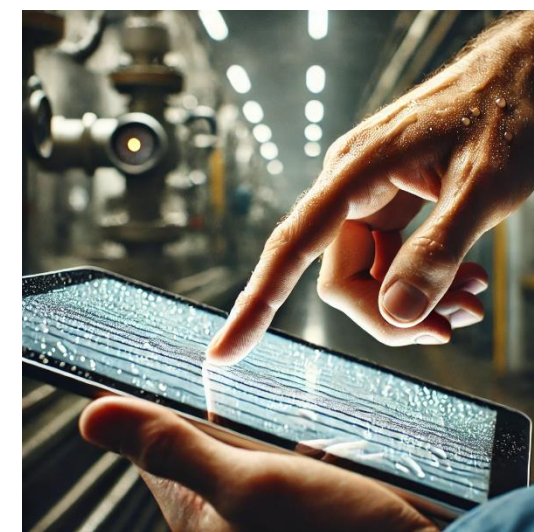
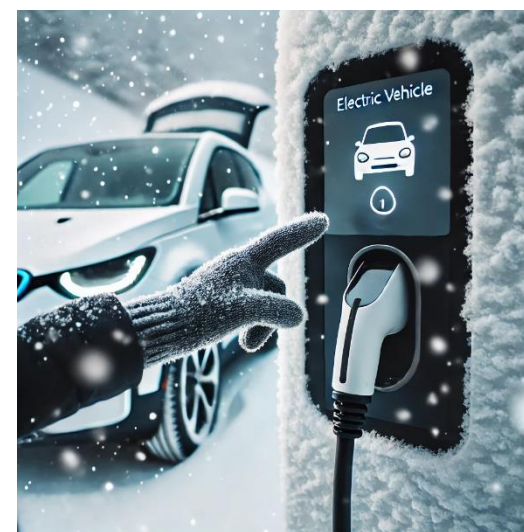


# ELAN 工業控制解決方案(防水與手套觸控)

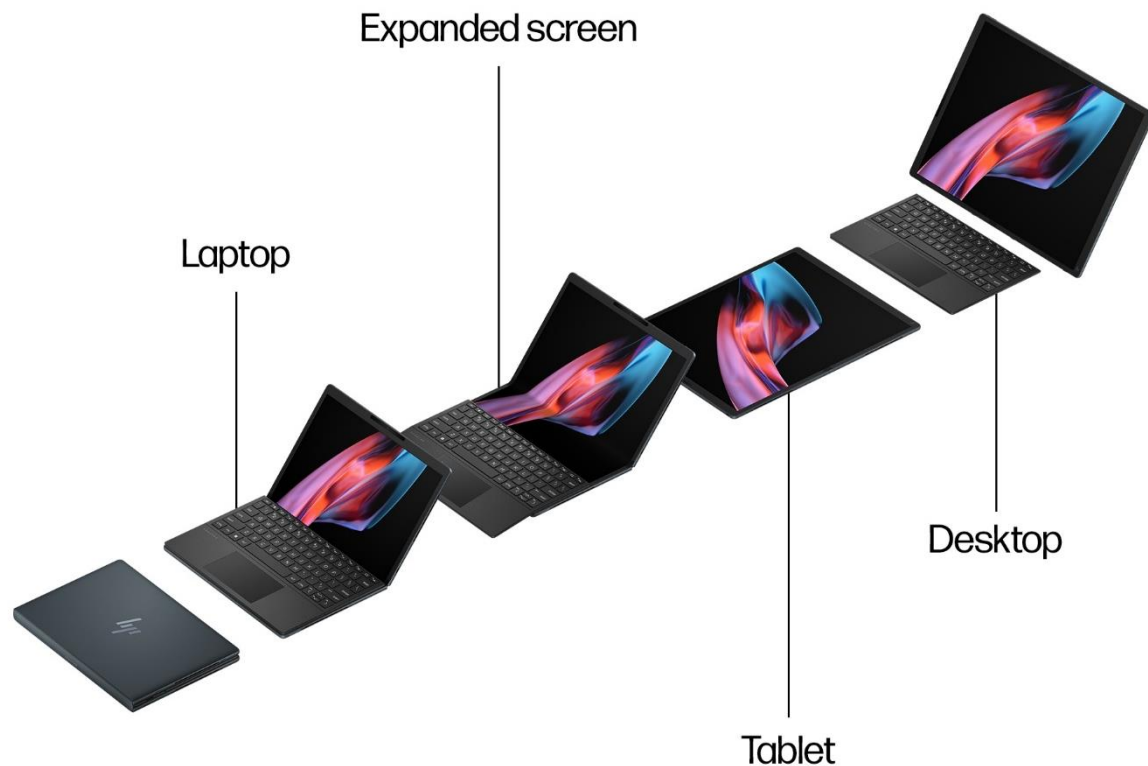


## Industrial Control

Touch Controller with Innovative  
Geometry Design for Industry



# AI觸控螢幕晶片解決方案應用於17.3吋折疊式筆記型電腦



Spectre Foldable 17



Gram Fold 17

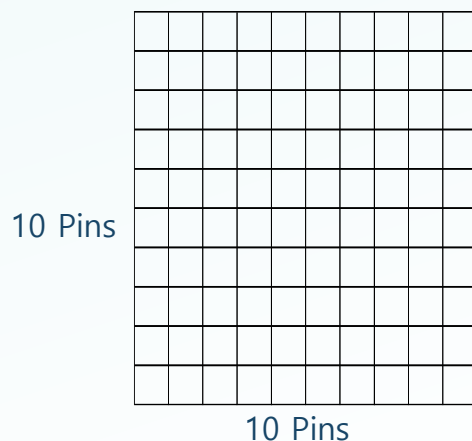


# 義隆提供單層On-Cell (Single Layer On Cell-SLOC)觸控解決方案

\*Example

## Multi Layer (Count Line)

Total 20 Pins



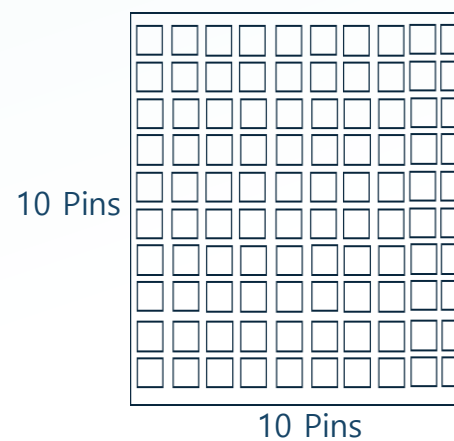
Single Chip

## ELAN Solution for SLOC

- ✓ Up to 16.0"
- ✓ Support Windows/Chrome OS
- ✓ Support On Cell LCD/On Cell OLED

## Single Layer (Count Pad)

Total 100 Pins



Multi (3~4pcs) Chips



Better Display Performance

High Transparency  
Less reflection



Higher SNR / Report Rate

165 Hz for Gaming  
Self mode sensing  
Glove support  
Water Proof



On-Cell LCD/OLED

Support  
High Resistance  
Heavy C\_loading



Simple Process

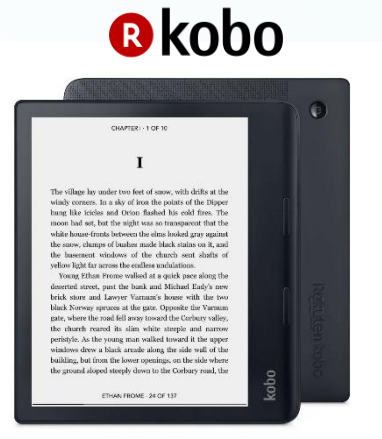
Shorter process cycle  
time for Panel maker

# 全球知名電子書品牌 採用義隆觸控螢幕晶片

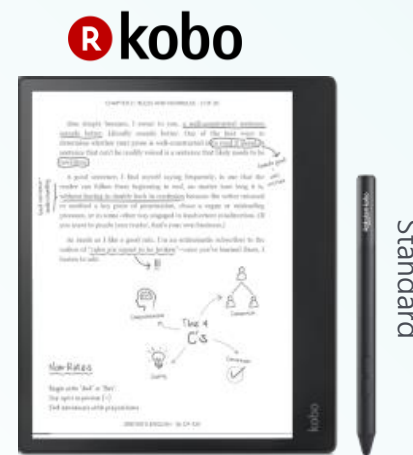
## Black & White E-paper



Libra 7"



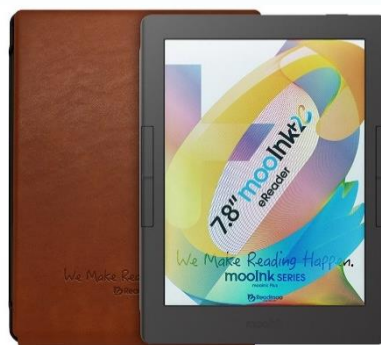
Sage 8"  
MPP2.0



Elipsa 10.3"  
MPP2.0

## Color E-paper

moolnk



Plus 2C 7.8"

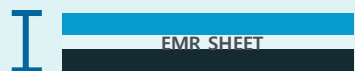
Bigme



Bigme 10.3"

# 電磁式 VS. 電容式主動筆應用於電子書之比較

## Thickness



EMR

## Thinner



Capacitive Active Stylus

## Cost

10.3" ~ 13": <30%~50%



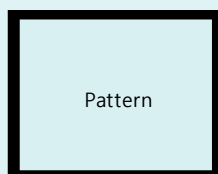
EMR

## Cheaper



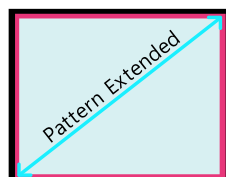
Capacitive Active Stylus

## Linearity



EMR

## Better



Capacitive Active Stylus

## Pen Vendor



EMR

## More



Capacitive Active Stylus

# AI之指紋辨識感測器的亮點

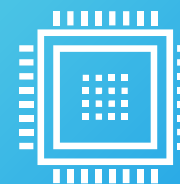
## #2

Notebook Market

## 100%

In-House  
Algorithm

## Smallest MOC Highly Brand-Compatible



AI Enabled

2.5D/3D  
Anti-Spoof

Fingerprint

## MOH&MOC

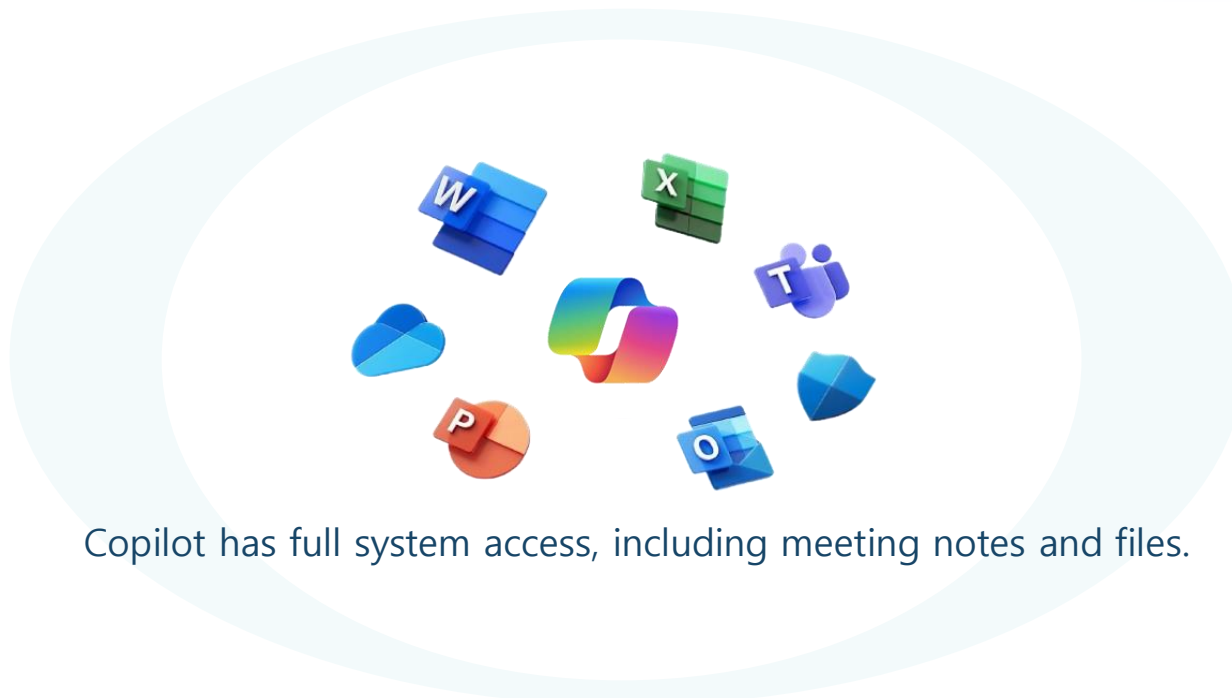
Single-Chip  
Encryption





# 義隆提供優質的AI Copilot 二合一指紋解決方案

指紋將保護您所有的個人資料



## Enhanced Security

Ensures only the user can access their personal Copilot.



## AI Data Protection

Secures sensitive information with fingerprint.



## User-Friendly

Seamless one-touch Copilot activation.

# 1H24 損益表

## YoY Comparison (Consolidated)

NT\$M

|                             | 1H24  | %     | 1H23  | %     | YoY(%) |
|-----------------------------|-------|-------|-------|-------|--------|
| Sales                       | 6,257 | 100.0 | 5,447 | 100.0 | 14.9   |
| Gross profit                | 3,019 | 48.2  | 2,323 | 42.6  | 30.0   |
| Sales expense               | 184   | 2.9   | 229   | 4.2   |        |
| G&A expense                 | 257   | 4.1   | 241   | 4.4   |        |
| R&D expense                 | 1,161 | 18.6  | 1,079 | 19.8  |        |
| OPEX                        | 1,602 | 25.6  | 1,549 | 28.4  | 3.4    |
| Operating profit            | 1,417 | 22.6  | 774   | 14.2  | 83.1   |
| Non-operating income & exp. | 285   | 4.6   | 80    | 1.5   |        |
| Profit before tax           | 1,702 | 27.2  | 854   | 15.7  | 99.3   |
| Net profit                  | 1,365 | 21.8  | 694   | 12.7  |        |
| Belong                      |       |       |       |       |        |
| Parent company              | 1,421 | 22.7  | 801   | 14.7  | 77.4   |
| Non-Controlling Interests   | (56)  |       | (107) |       |        |
| * EPS (NT\$)                | 4.98  |       | 2.82  |       | 76.6   |

\* 304 million shares issued: 286.2/ 284.6 million shares outstanding as of the end of June 2024/ June 2023.

\* Consolidated Statement of Financial Position (Reviewed).

# 2024年第3季業績展望

基於目前對未來營運展望之假設，義隆公司預期：

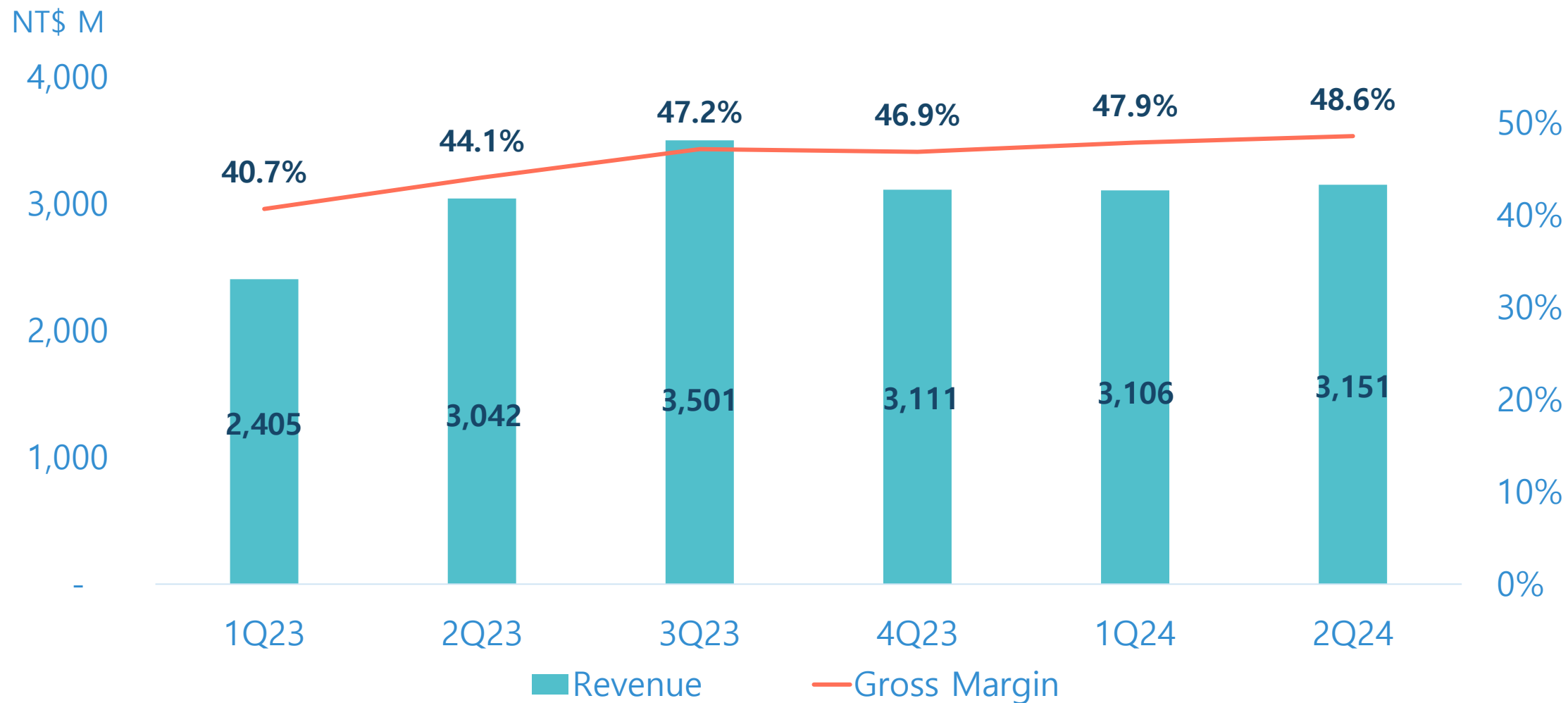
★ 合併營收約介於新台幣31億～34億之間

★ 銷貨毛利率約於47.5%～49.5%之間

★ 營業利益率約介於22.1%～26.3%之間

- 簡報內所含之前瞻性敘述將受各項風險與不確定因子影響而與本公司之表示有所差異。
- 除受法令要求外，本公司並無義務於日後情況變動時更新簡報內所為之前瞻性敘述。

# 義隆營運績效



## 即將崛起的AI產業趨勢

1. 生成式人工智慧，將創新技術引進至人機介面。觸控、觸控帶筆功能和語音互動裝置將可取代傳統裝置，進一步提升觸控螢幕的市佔率。
2. AI PC為企業取得競爭優勢，並強化個人產值。
3. 搭載ELAN指紋辨識方案的AI Copilot，可增強安全性、資料保護及使用者友善功能。
4. AI PC是普及個人AI模型的最佳解決方案。此裝置必須可提供強大的資料運算、大儲存容量、多樣化的互動設備和應用。
5. AI PC將於2024年建立完備的供應鏈系統，包括作業系統、平台、零組件...等，進一步推動2025年AI PC的發展。



# Thank You



ELAN Microelectronics Corporation