



義隆 Smart-Input™ Solutions

Dual Transformation through AI

藉由AI實現企業轉型

2024/09/11

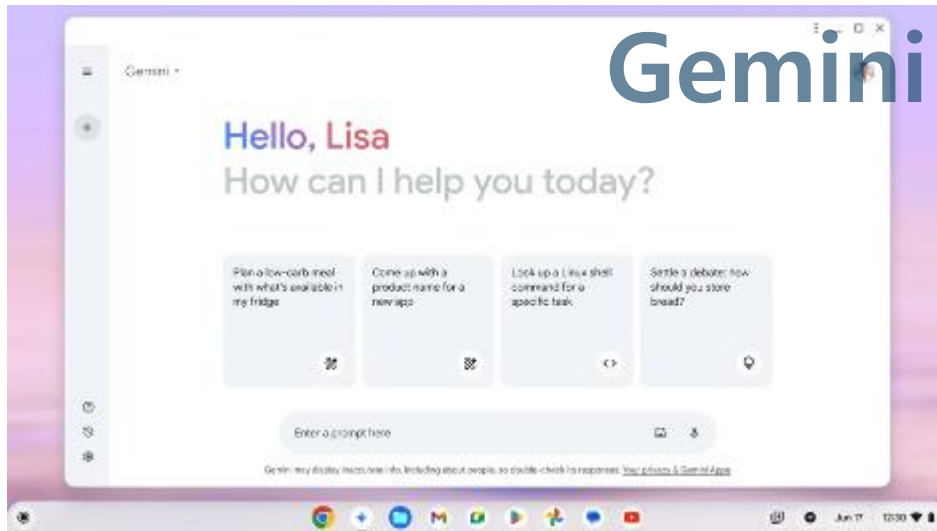
第一金證券2024年第三季投資論壇



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

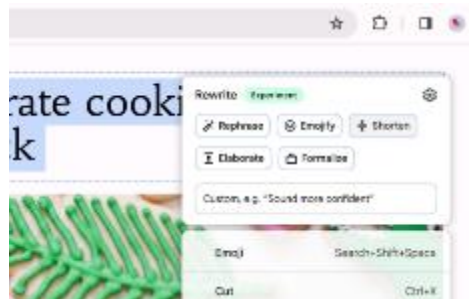


ASUS Chromebook Plus 514



HP Chromebook Plus x360

AI Writing Tool



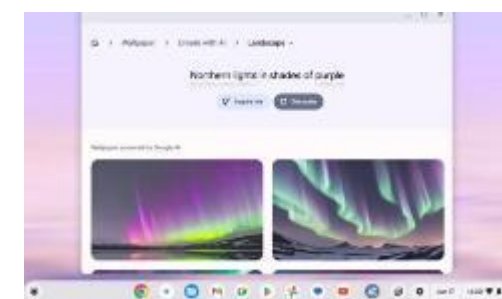
AI Magic Editor



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



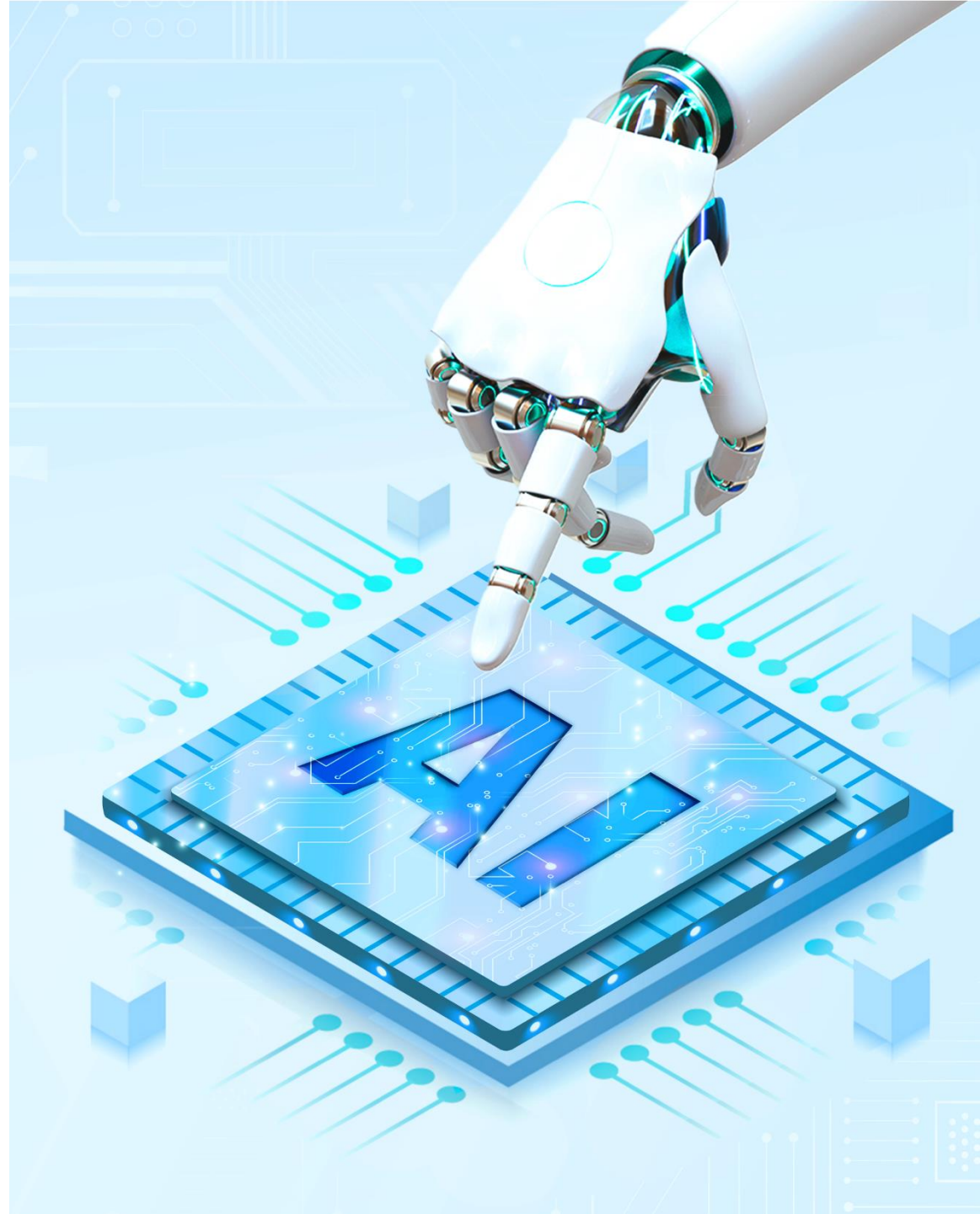
AI PCs及Windows系統更新將有助於推動新需求。



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-UsabilityTM

Best In-Class Palm Prevention

100⁺

MP Projects / YR

AI Enabled

Palm Rejection
Gesture
Noise Immunity
Moisture Proof

Touchpad

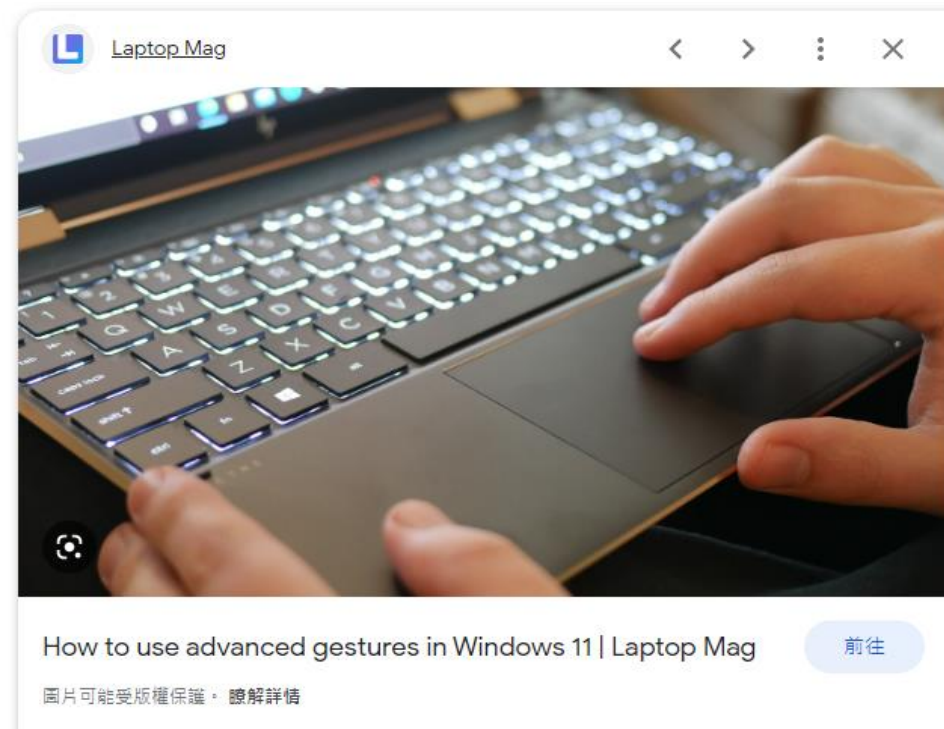
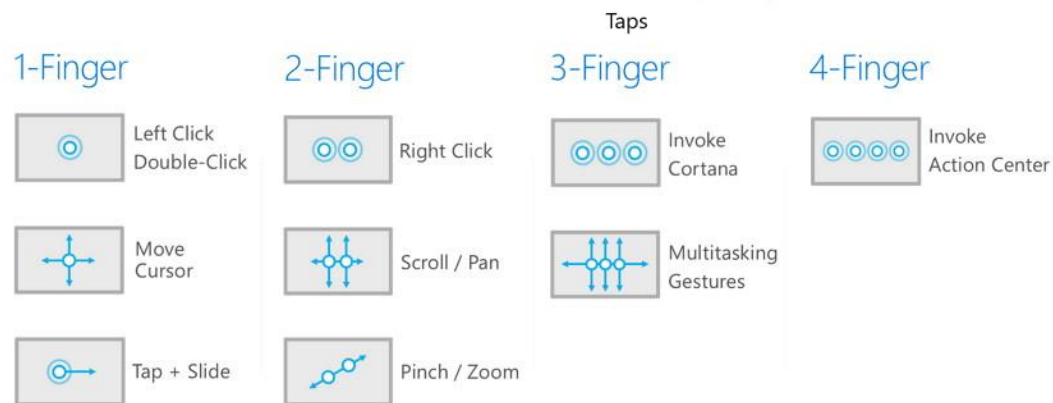
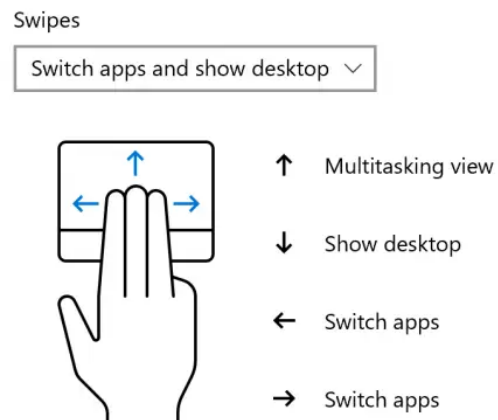
50%+

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

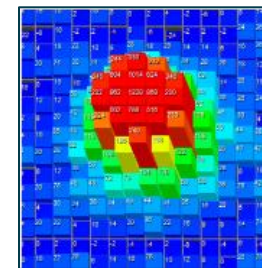
觸控板明顯朝大尺寸面積發展趨勢演進



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



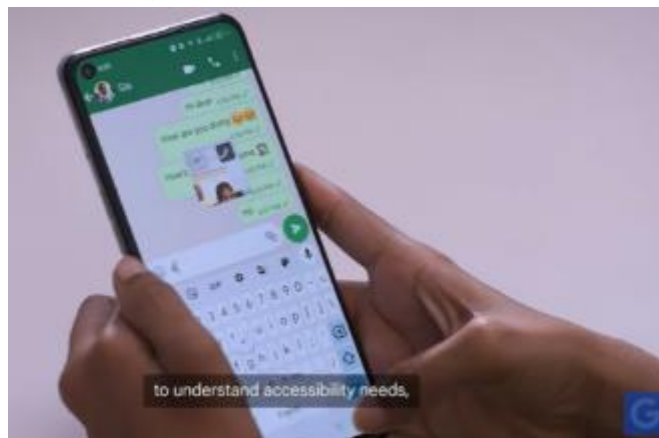
Eye Tracking



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



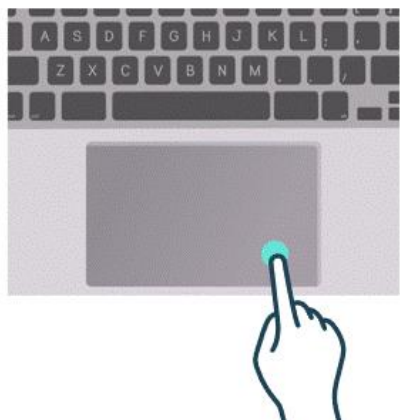
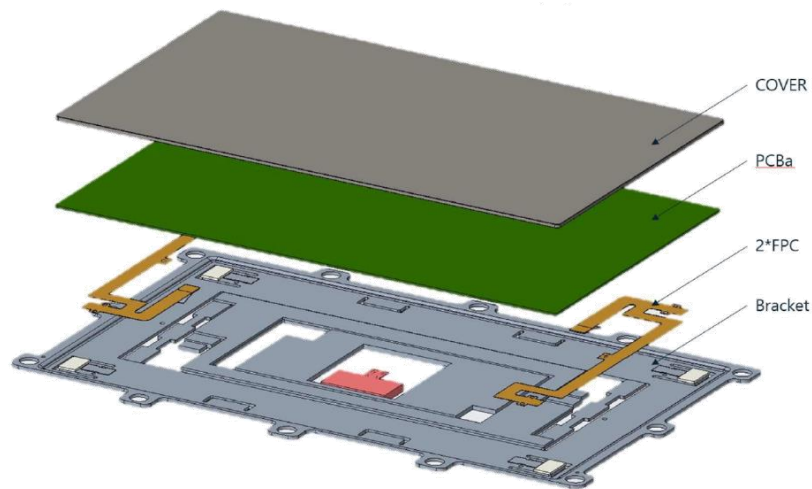
The new adaptive touchmode in Surface Laptop Studio 2



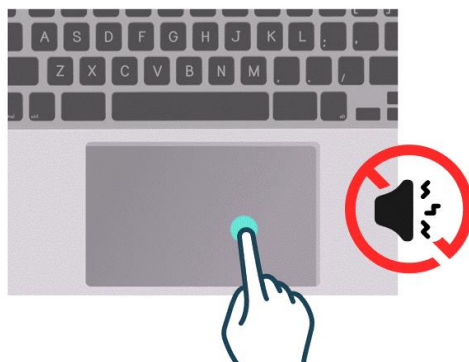
<https://www.youtube.com/watch?v=fKtBCqZ6ZfE>

帶有AI功能之觸覺回饋觸控板的特色與優勢

Gen2 (Premium)

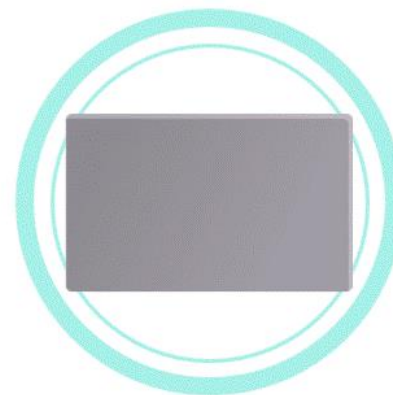
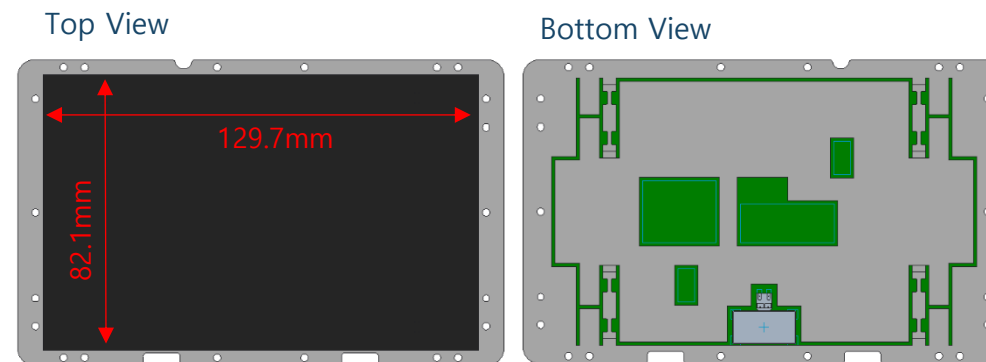


**All-Zone
Clickable**



**Silent
Click Sound**

Gen3 (Mainstream)



**Different
Haptic Performs**



**Gesture
Control**

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

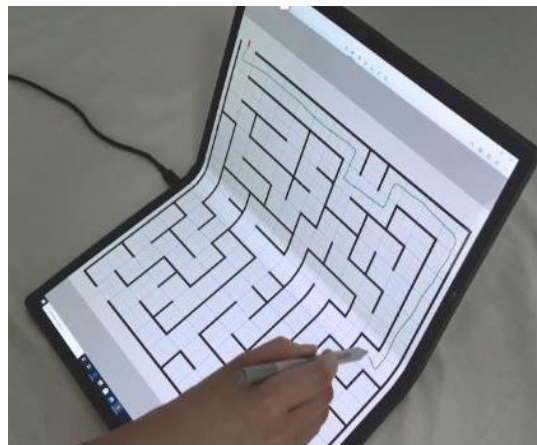
AI Enabled

Pen Track Prediction
Palm Rejection
Power Saving
Gesture Recognition
Moisture Proof

Touchscreen

50%+

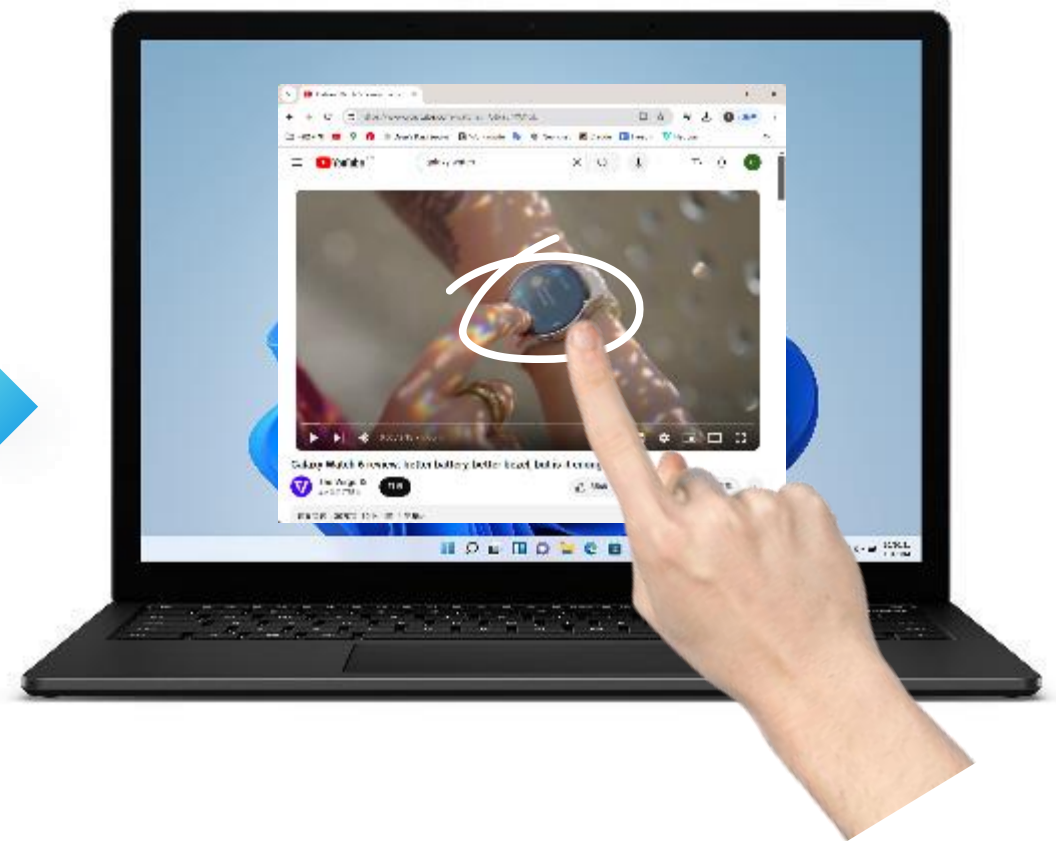
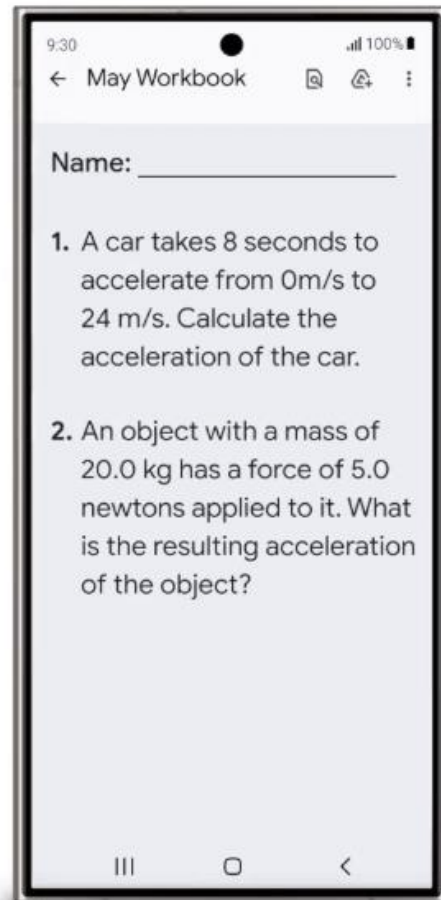
Market Share



畫圈搜尋:手機端AI搜尋功能衍生應用

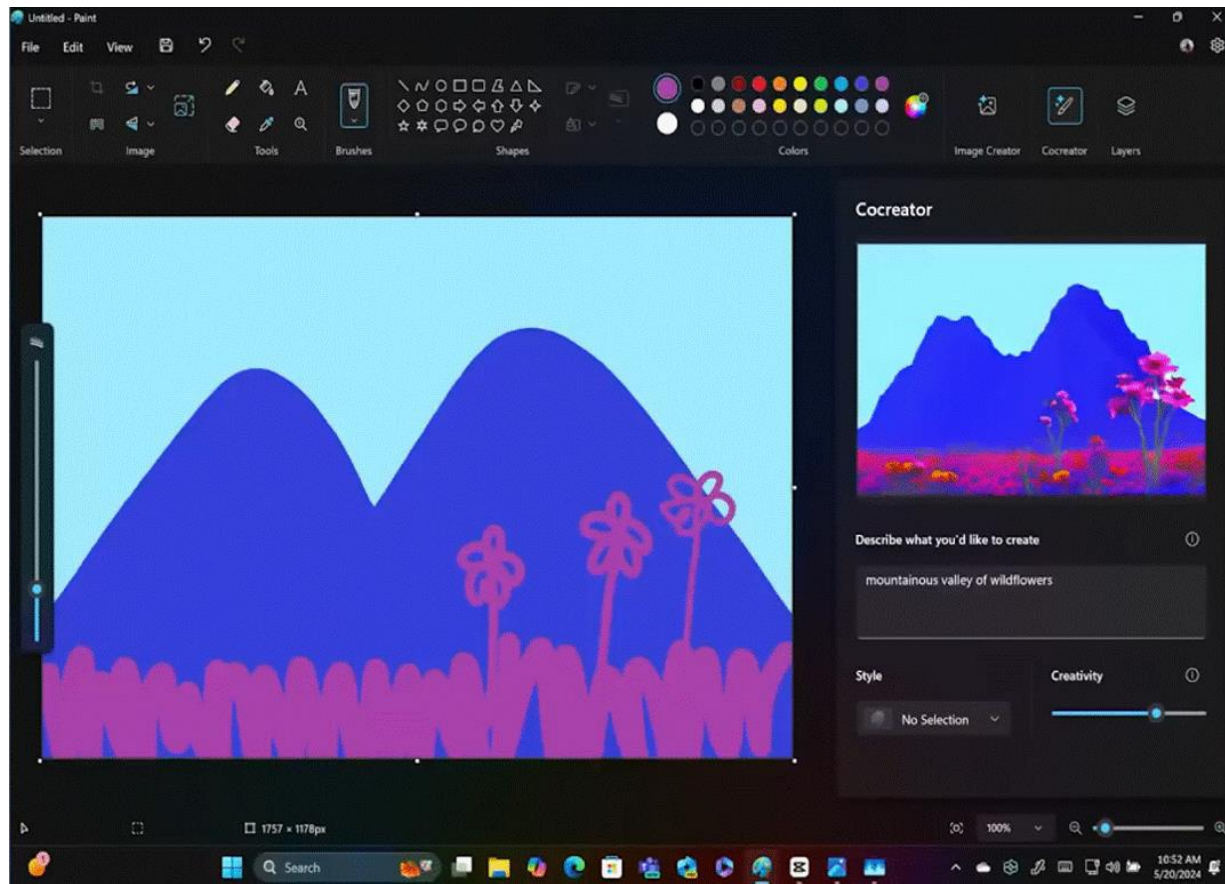
Google Circle to Search

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



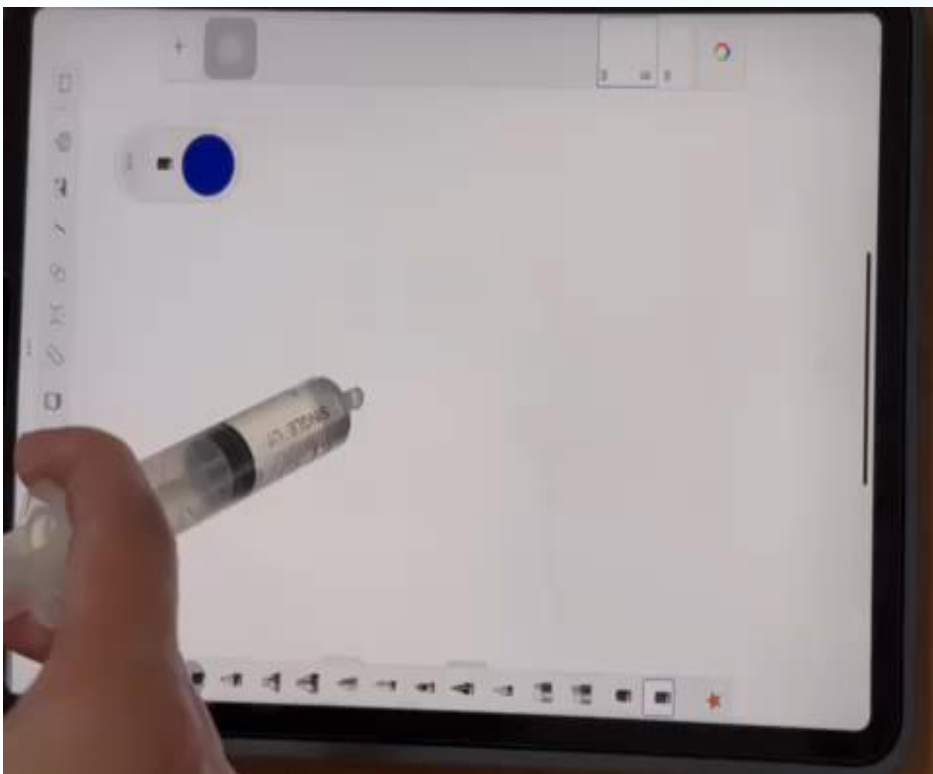
AI 使觸控筆具低延遲、低耗電等功能



AI Prediction

AI防水功能 展現明顯差異

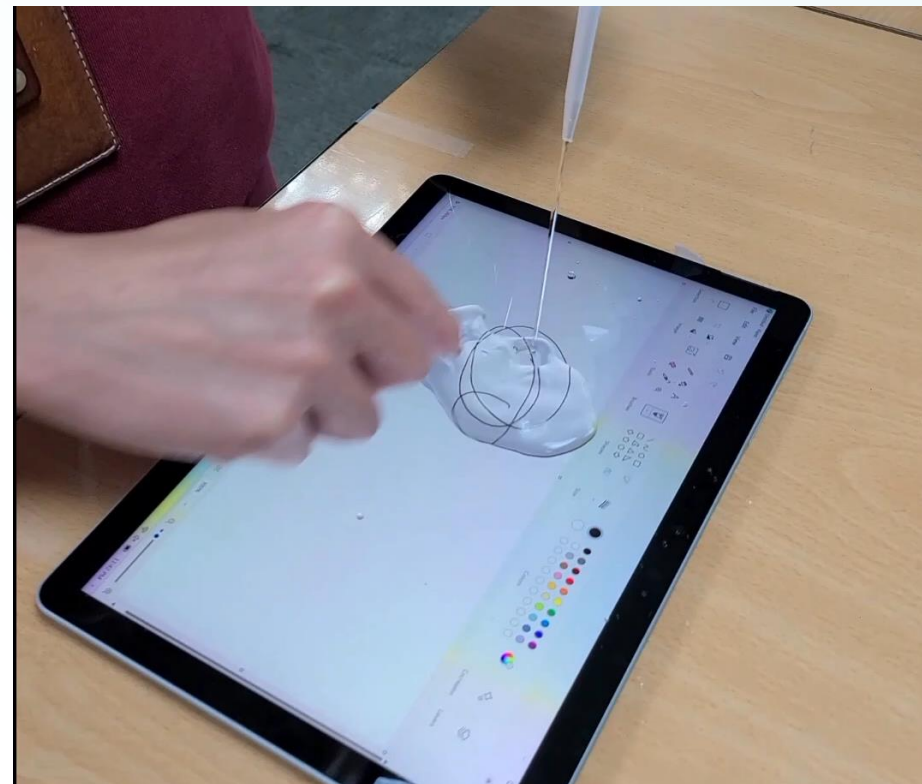
w/o AI Moisture Proof



iPad Pro-11

Test Condition : Water 5 mL

w/ AI Moisture Proof

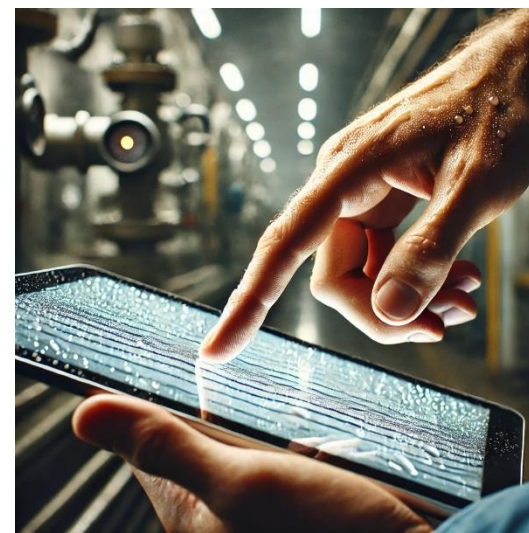


ELAN 工業控制解決方案(防水與手套觸控)

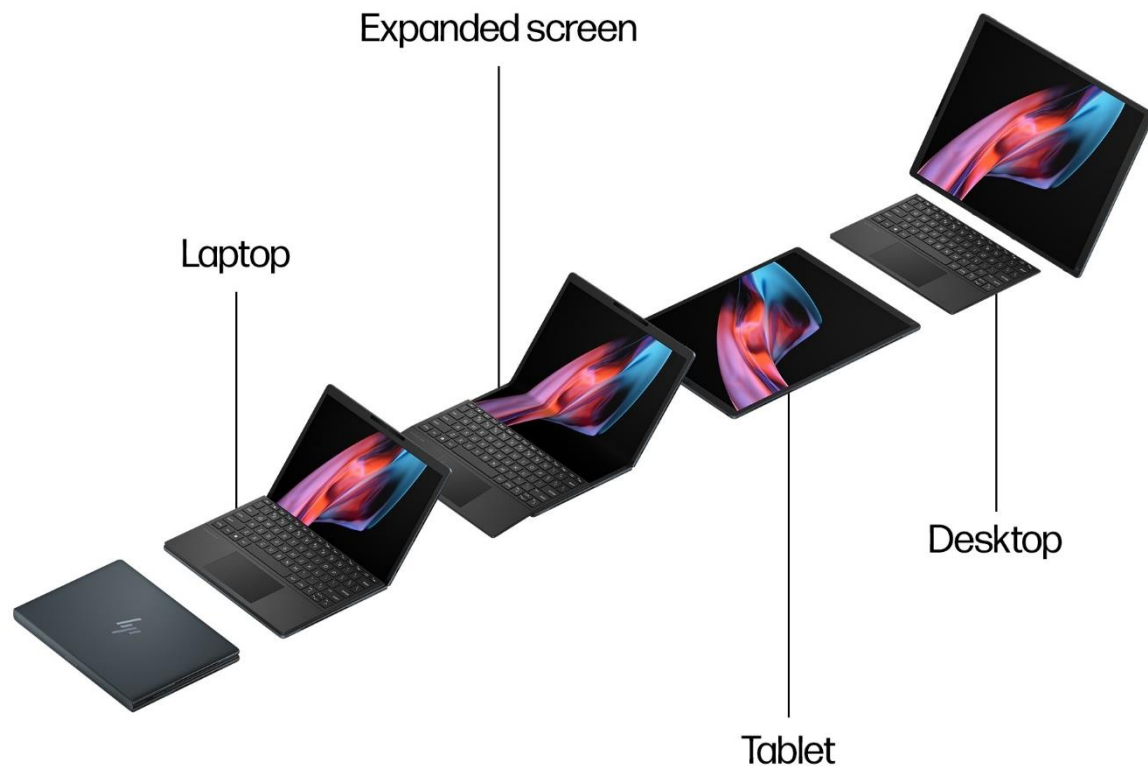


Industrial Control

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

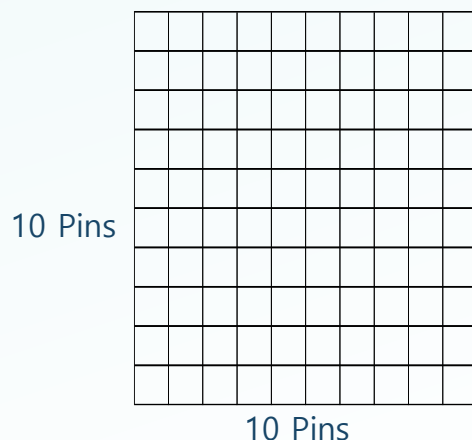


義隆提供單層On-Cell (Single Layer On Cell-SLOC)觸控解決方案

*Example

Multi Layer (Count Line)

Total 20 Pins



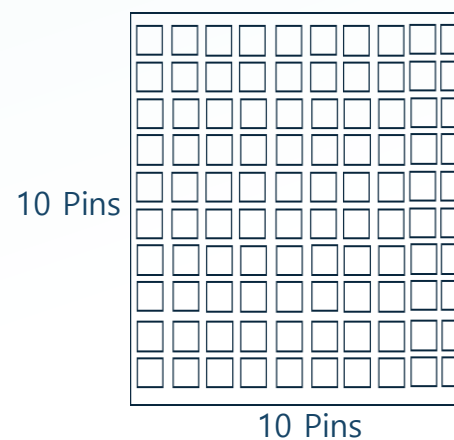
Single Chip

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

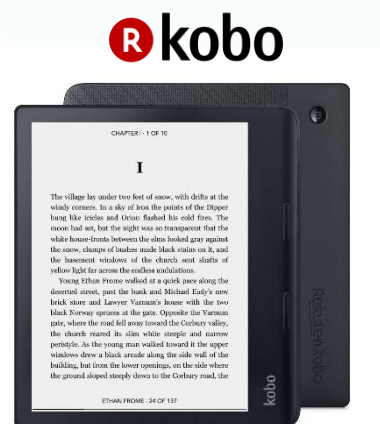
Shorter process cycle
time for Panel maker

全球知名電子書品牌 採用義隆觸控螢幕晶片

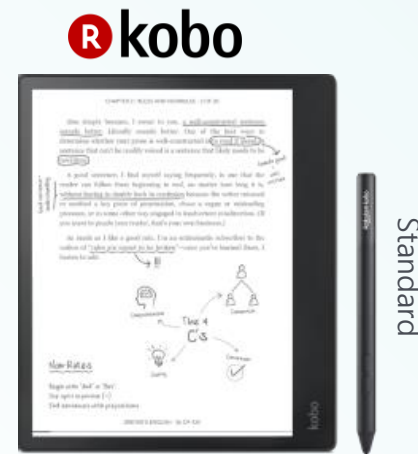
Black & White E-paper



Libra 7"



Sage 8"
MPP2.0



Elipsa 10.3"
MPP2.0

Color E-paper

moolnk



Plus 2C 7.8"

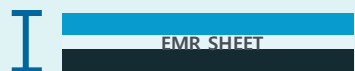
Bigme



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 Stylus

EMR film

EMR

Cheaper

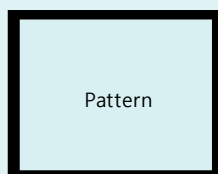


ITO Film

Active Stylus

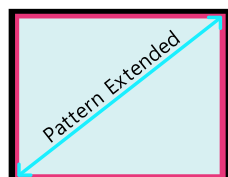
Capacitive Active Stylus

Linearity



EMR

Better



Capacitive Active Stylus

Pen Vendor

Wacom

EMR

More

MAXEYE

Wacom

SUNWODA

Hanvon

Chicony

Capacitive Active Stylus

AI之指紋辨識感測器的亮點

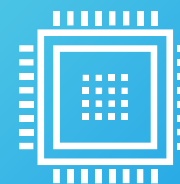
#2

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



Copilot has full system access, including meeting notes and files.



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：

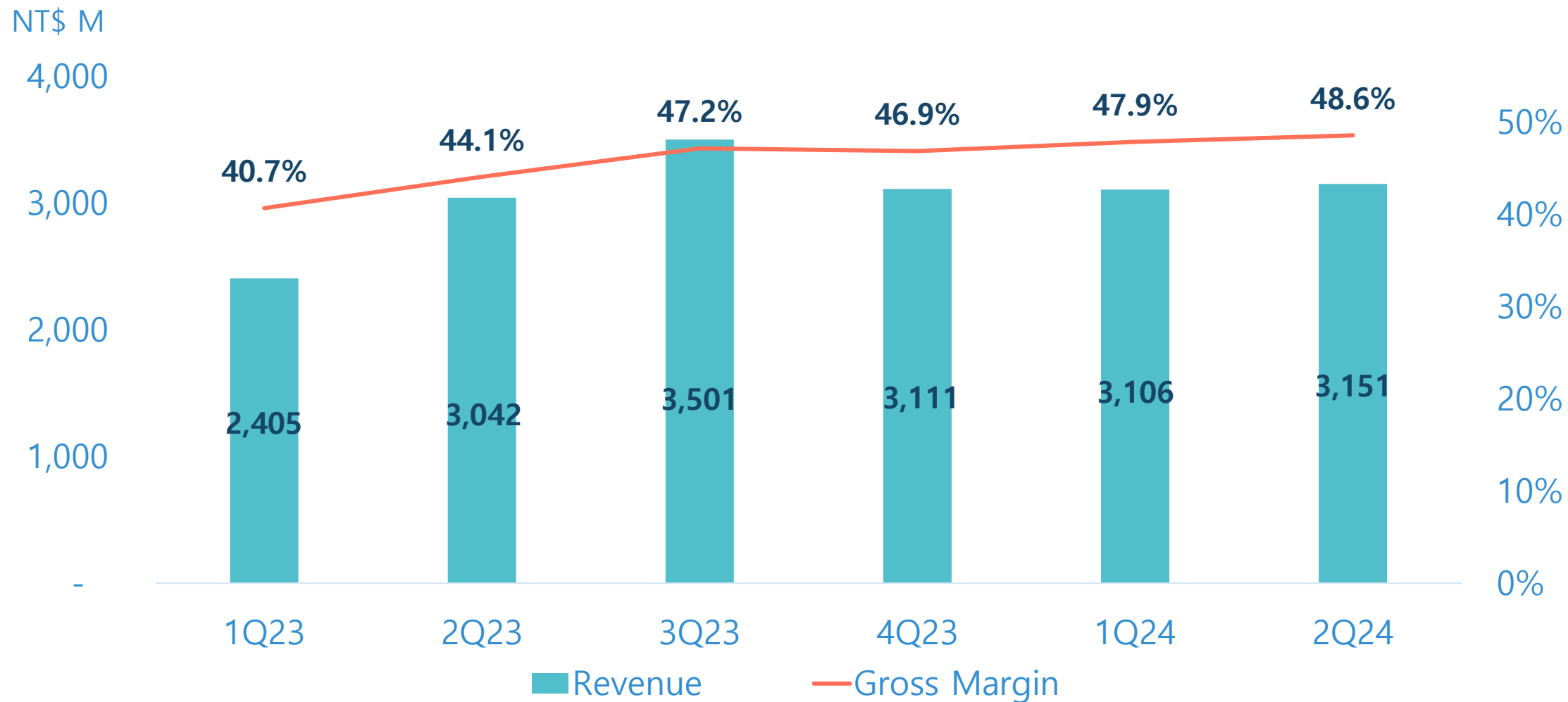
★合併營收約介於新台幣31億～ 34億之間

★ 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