



義隆 Smart-Input™ Solutions

Dual Transformation through AI

藉由AI實現企業轉型

2024/03/05

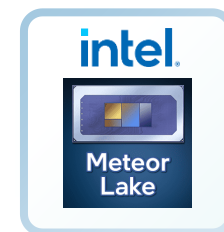
2024年第一季投資論壇



ELAN Microelectronics Corporation

英特爾對AI PC市場前景看好

intel AI Everywhere



ASUS

acer



msi

Lenovo

Google



SAMSUNG



GIGABYTE

dynabook

Nearly **50** Products Featuring **Intel AI PC (NB+DT) Chips** to Launch in Taiwan in Q1,2024

Over **230** AI PC (NB+DT) Products with New Intel Processors to Launch in 2024

Targeting **80%** Market Share by 2028

2024 CES 展出前五大品牌各式AI PC



XPS 16
XPS 14
XPS 13



ALIENWARE m16 R2
ALIENWARE x16 R2



OMEN 14



OMEN 16



Spectre X360



Spectre X360



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



Aspire Go 15



市調機構對全球筆記型電腦出貨量的預測

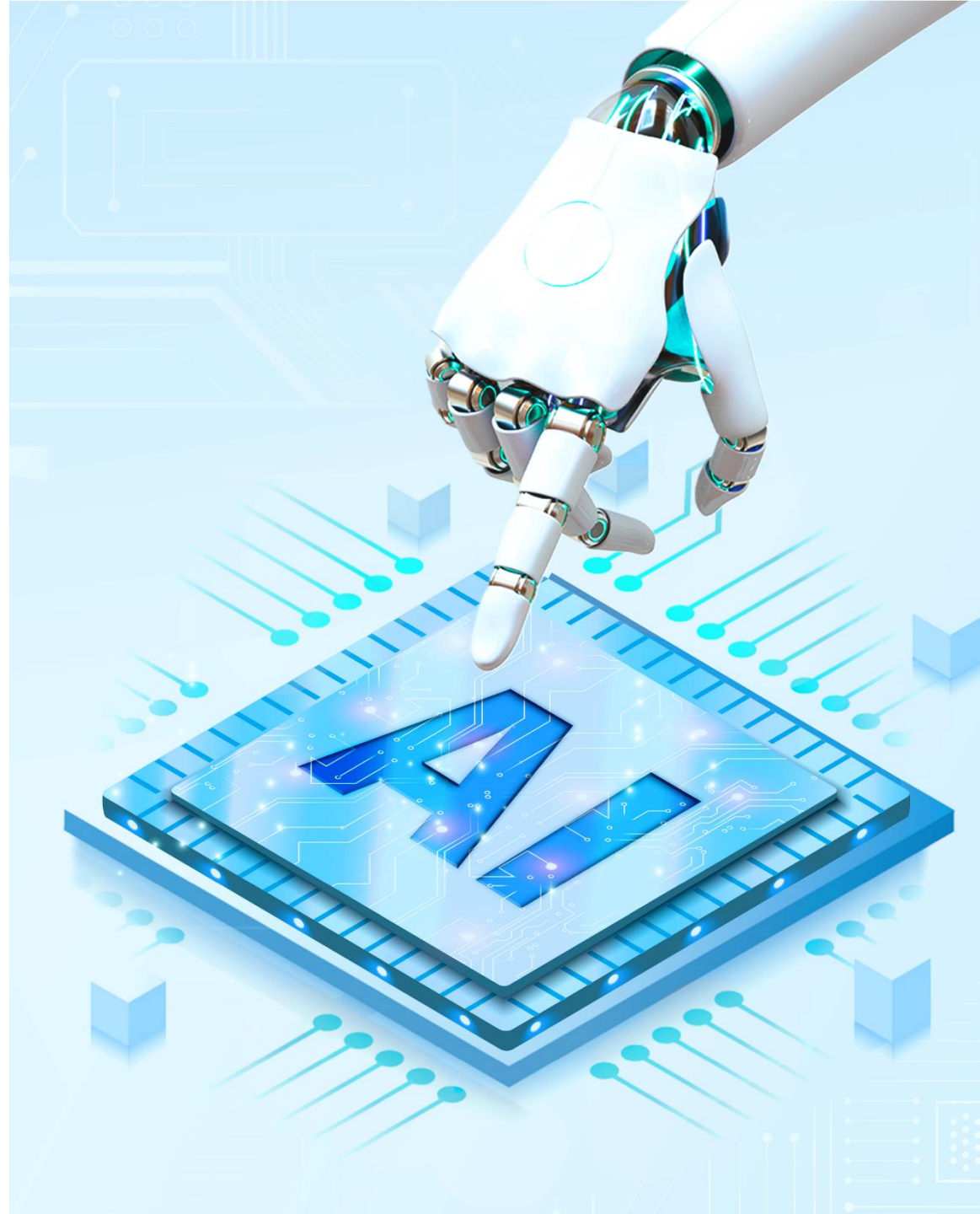
Unit in million

	2022	2023	2024	2025	2026	2027
IDC	212	183	192	205	211	216
Gartner	208	182	191	210	218	217
Omdia	201	174	186	205	212	222
Digitimes	187	165	169	181	185	188
IDC YoY	-18.9%	-13.3%	4.8%	6.8%	2.6%	2.5%
Gartner YoY	-18.9%	-12.7%	5.3%	10.1%	3.8%	-0.6%
Omdia YoY	-23.1%	-13.3%	6.8%	10.1%	3.3%	4.8%
Digitimes YoY	-24.2%	-11.8%	2.6%	6.7%	2.6%	1.2%

* Source: IDC, Gartner, Omdia, Digitimes



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**

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

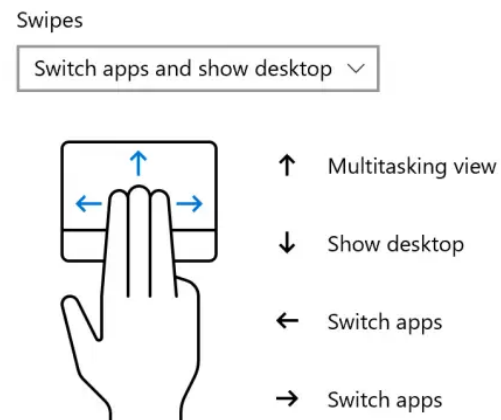
50%+

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



1-Finger



Left Click
Double-Click



Move
Cursor



Tap + Slide

2-Finger



Right Click



Scroll / Pan



Pinch / Zoom

3-Finger



Invoke
Cortana



Multitasking
Gestures

4-Finger



Invoke
Action Center



Source: Laptop Mag

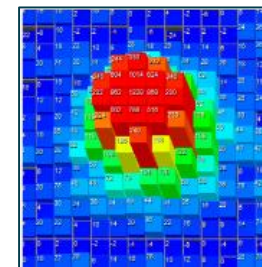
觸控板的趨勢朝向大尺寸面積演進



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

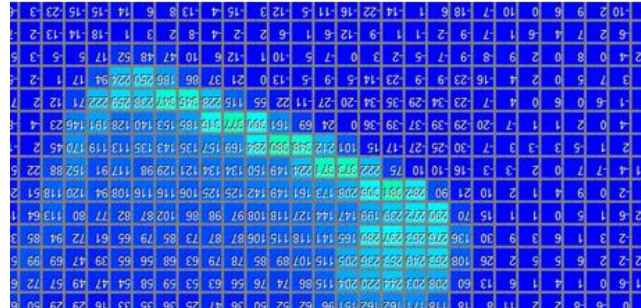
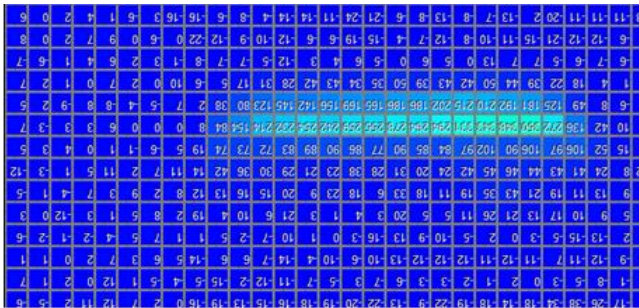


Low Accidental Touch Rate
as Normal Size Touchpad

AI高效能之觸控板模組於多元化應用

Wireless Charger / Smart Card

Object Detection & Classification



Application



Open Earphone
Control App



Open Mouse
Control App



Open
Gaming App



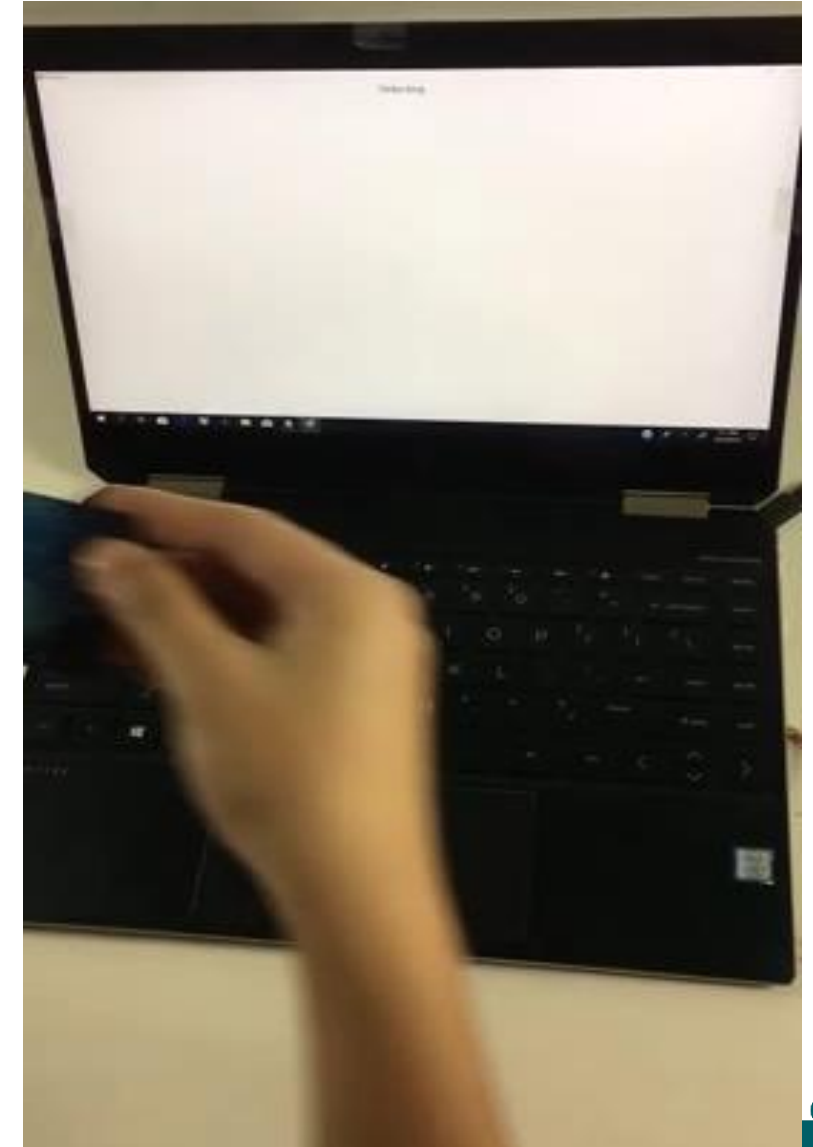
Open Note-Taking
App



Open Mobile
Transfer App

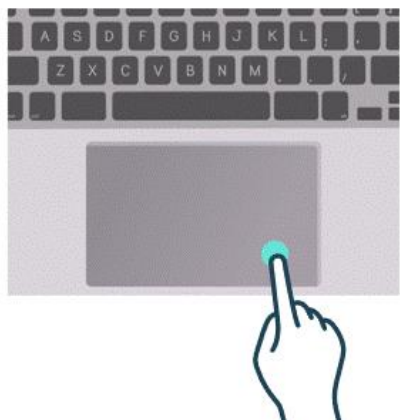
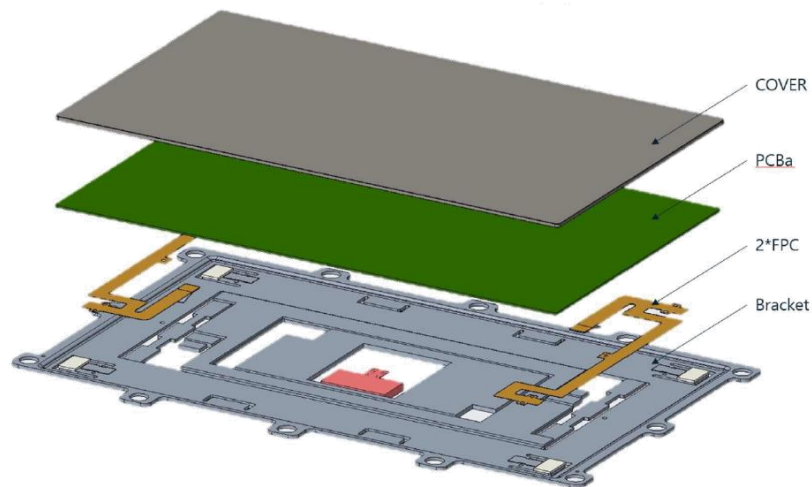


More Creative
Application

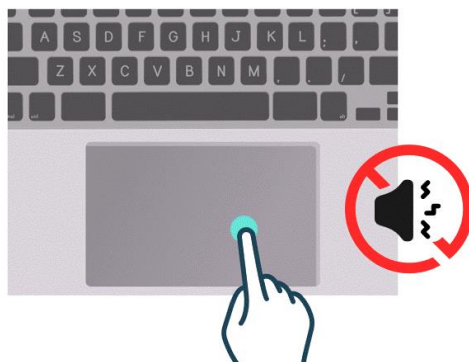


帶有AI功能之觸覺回饋觸控板的特色與優勢

Gen2 (Premium)

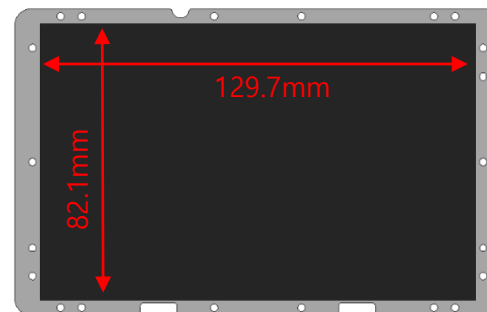


**All-Zone
Clickable**

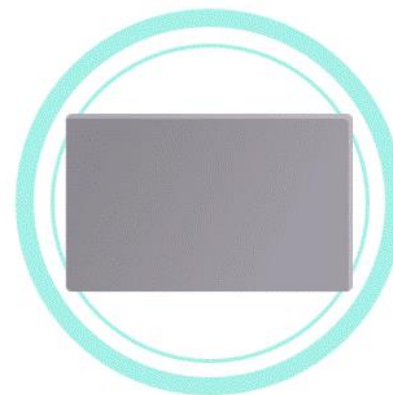
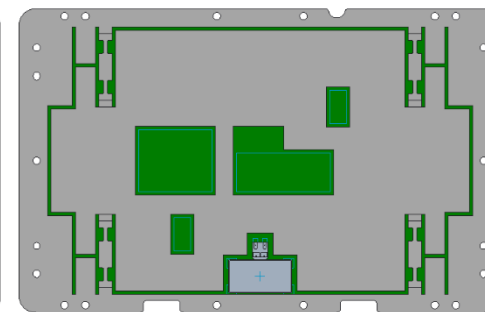


**Silent
Click Sound**

Top View



Bottom View



**Different
Haptic Performs**



**Gesture
Control**

採用義隆帶有AI之觸覺回饋觸控板解決方案的筆電已陸續上市

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

8+ Projects
On-going

2023 - 2024

具競爭力的AI觸控螢幕晶片

#1

Touch IC Market

CONTINUOUS

11 YR

Global Touch IC #1

Development with
Stylus Manufactures

MAXEYE

Wacom®

SUNWODA

Hanvon

Chicony

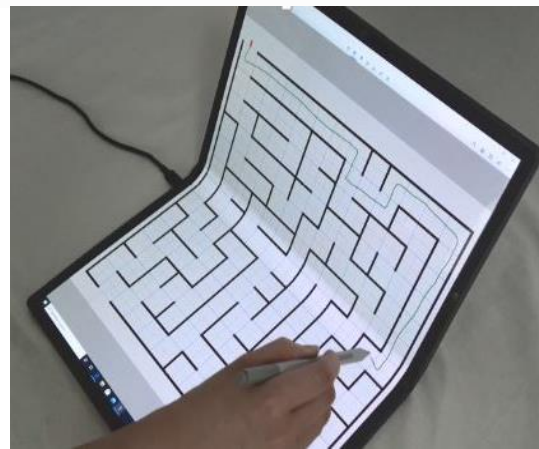
AI Enabled

Pen Track Prediction
Palm Rejection
Power Saving
Gesture Recognition
Moisture Proof

Touchscreen

50%+

Market Share

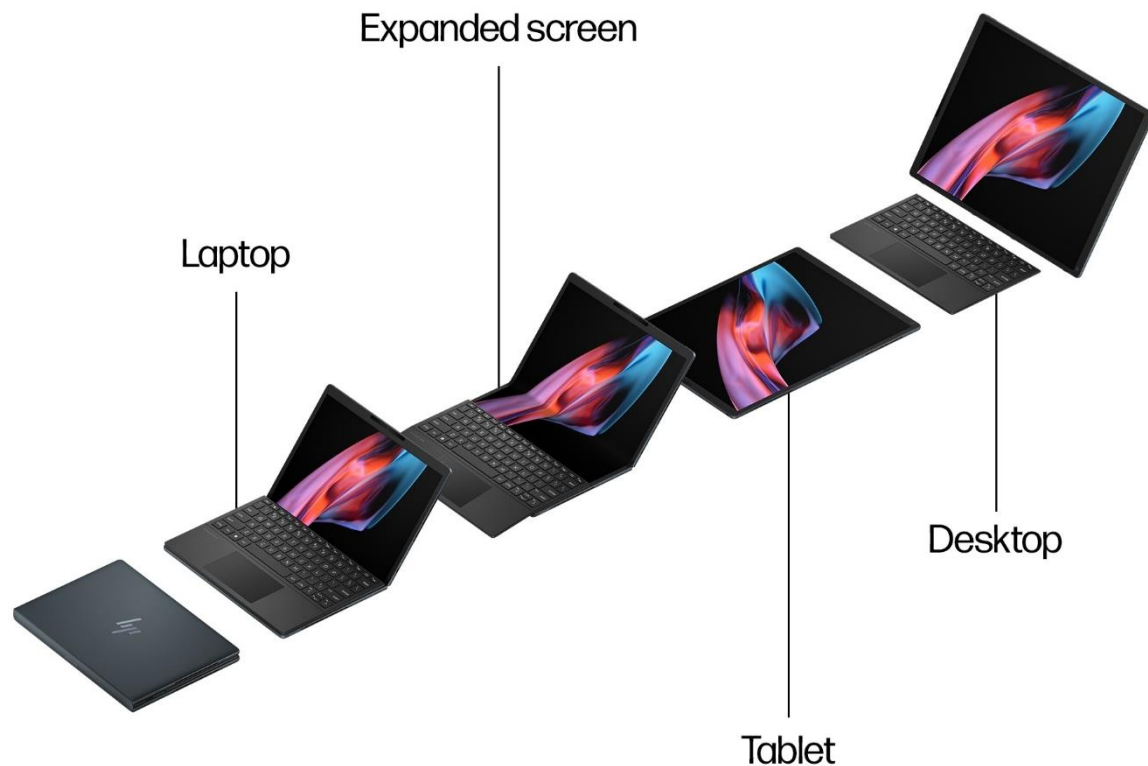


AI 使觸控筆具低延遲、低耗電等功能



AI Prediction

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



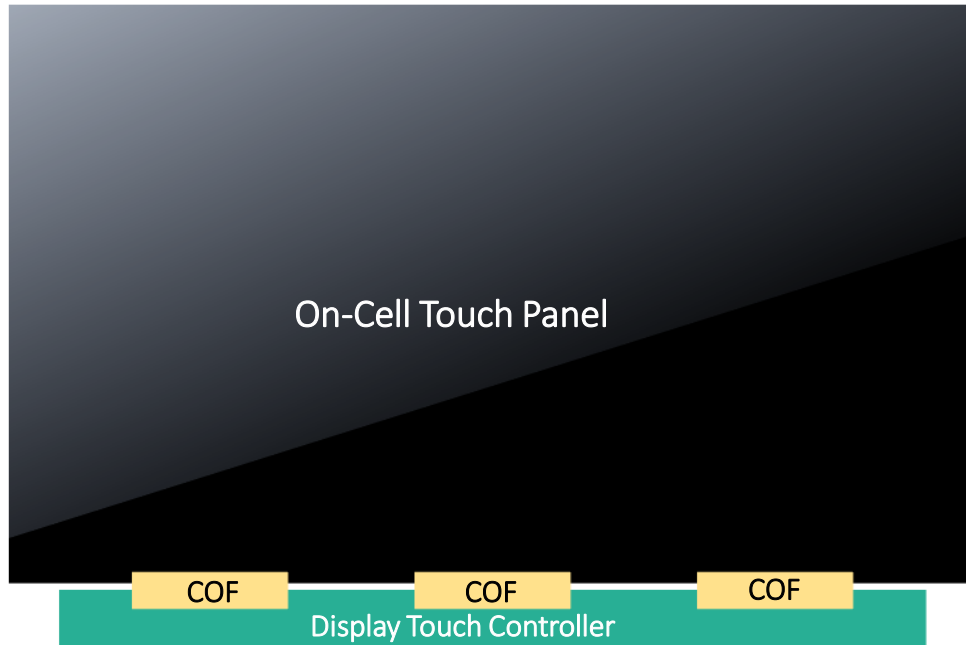
Spectre Foldable 17



Gram Fold 17



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



ELAN Solution for SLOC

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



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

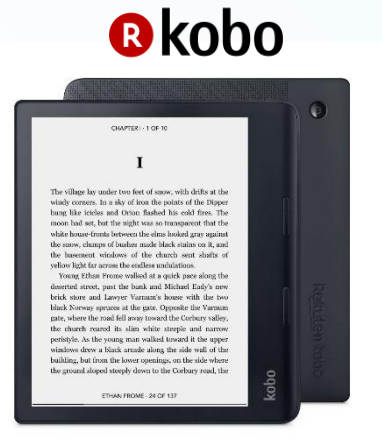
Shorter process cycle
time for Panel maker

觸控螢幕晶片解決方案應用於電子書

Black & White E-paper

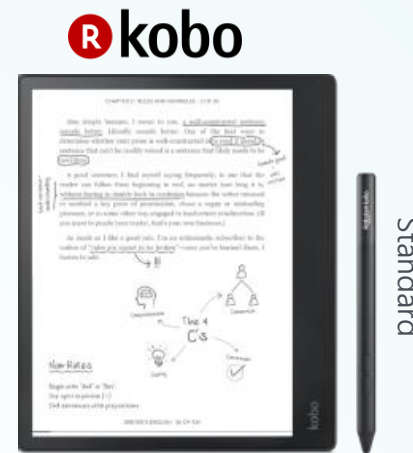


Libra 7"



Sage 8"
MPP2.0

Optional

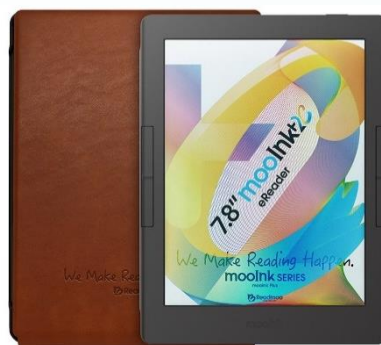


Elipsa 10.3"
MPP2.0

Standard

Color E-paper

moolnk



Plus 2C 7.8"

Bigme



Bigme 10.3"

AI之指紋辨識感測器的亮點

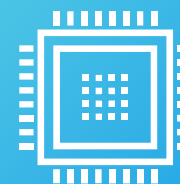
#2

Notebook Market

100%

In-House
Algorithm

Smallest MOC
Highly Brand-Compatible



AI Enabled

2.5D/3D
Anti-Spoof

Fingerprint

MOH&MOC

Single-Chip
Encryption





合併損益表 - 2023年 vs. 2022年

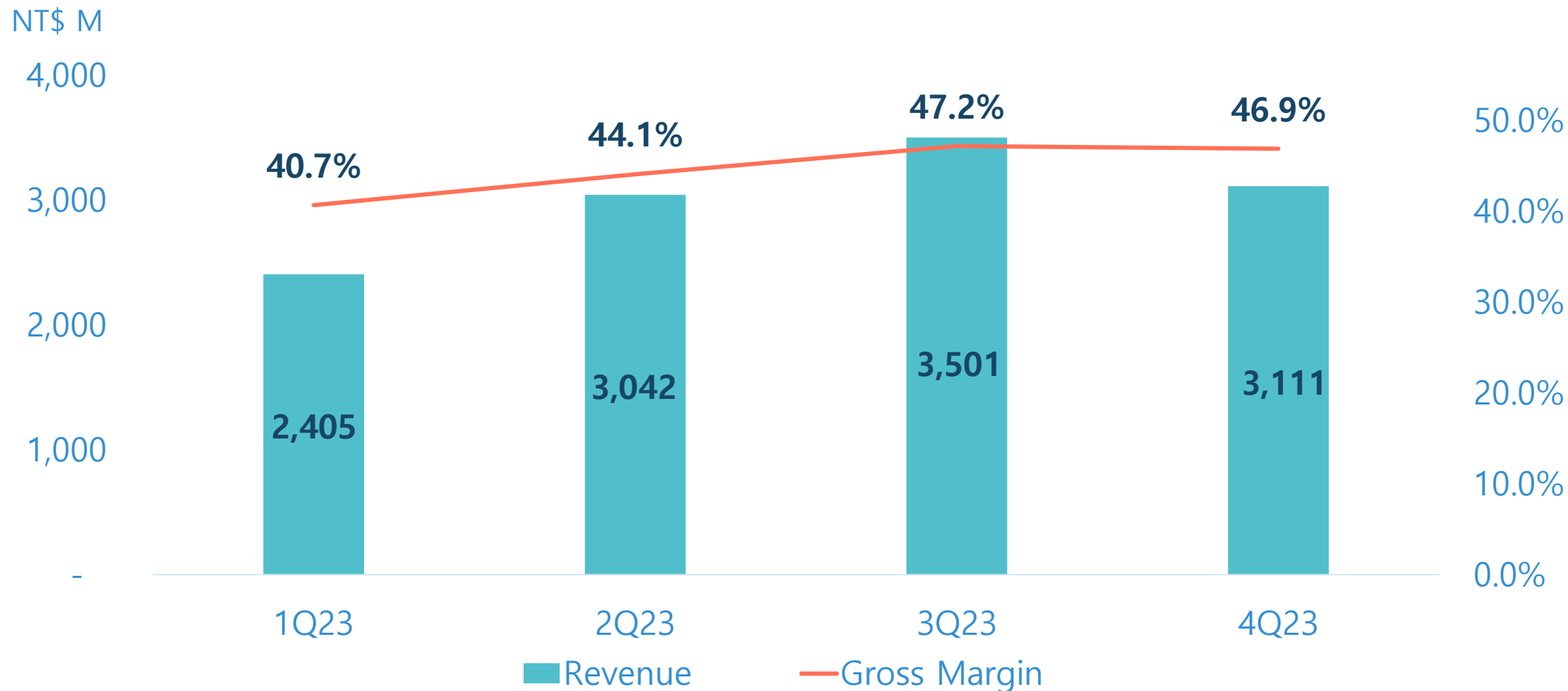
單位:新台幣佰萬元

	2023年	%	2022年	%	YoY(%)
營業收入淨額	12,059	100.0	13,030	100.0	(7.5)
營業毛利	5,432	45.0	5,987	45.9	(9.3)
銷售費用	370	3.1	581	4.5	
管理費用	479	3.9	457	3.4	
研發費用	2,149	17.8	2,165	16.6	
營業費用	2,998	24.8	3,203	24.5	(6.4)
營業淨利	2,434	20.2	2,784	21.4	(12.6)
業外收入及支出	38	0.3	(81)	(0.7)	
稅前淨利	2,472	20.5	2,703	20.7	(8.5)
稅後淨利	1,985	16.5	2,034	15.6	
本期淨利歸屬於					
母公司業主	2,143	17.8	2,152	16.5	(0.4)
非控制權益	(158)		(118)		
* 每股盈餘 (元)	7.53		7.56		(0.4)

* 期末發行股數: 3.04億股; 流通在外股數: 2.846億股

* 財務資料來源: 會計師查核

義隆營運績效



* There were nearly 50 AI PC models at 2024 CES, most of which adopted ELAN's solutions (Touchpad Module, Touchscreen, Controller & Fingerprint Sensor).

結論

1. 2024~2026，AI PC成長趨勢明確，預計啟動換機潮
2. ELAN身為關鍵零組件供應商，明顯受惠於AI PC
3. 規格升級、尺寸放大、功能提升，帶動ASP上揚
4. 今年CES 如Intel預測有50個 AI PC的 model, 其中大多數採用義隆的解決方案
(包括觸控板模組, 觸控螢幕晶片, 指紋辨識感測器等)
5. 產品市場占有率回升，新的應用領域逐漸發酵中



Thank You



ELAN Microelectronics Corporation