

德律科技股份有限公司



報告人：陳冠元/財務長兼代理發言人

June 2026

www.tri.com.tw

德律科技股份有限公司



成立時間：
1989年4月10日



創立人：
陳玠源董事長



資本額：
新台幣23.62億



台北總部



林口製造中心

全球銷售與服務布局

全球超過50家經銷/代理商



ESG應用方案進展

發行永續報告書



🏠 / 投資人關係 / 永續報告書 / 永續報告書

投資人關係

致股東信

財務資訊

永續報告書

永續報告書

公司治理

股東專權

活動訊息

利害關係人

QA

永續報告書

日期	標題
2023/08/28	2022年永續報告書

Click to download the ESG Report



主力產品

☆ 自動光學檢測設備(IT/Image Tester)

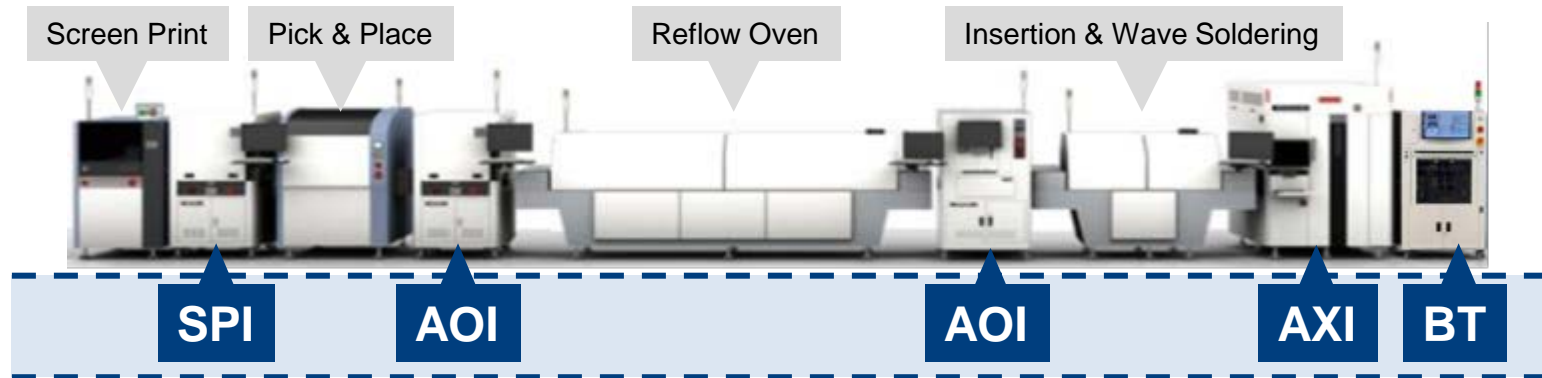
- ☆ 錫膏自動光學影像檢測機(SPI)
- ☆ 自動光學影像檢測機(AOI)
- ☆ X-ray自動檢測機(AXI)

☆ 電路板測試機(BT/In-Circuit Board Tester)

- ☆ 組裝電路板測試機(MDA)
- ☆ 全功能電路板自動測試機(ICT)

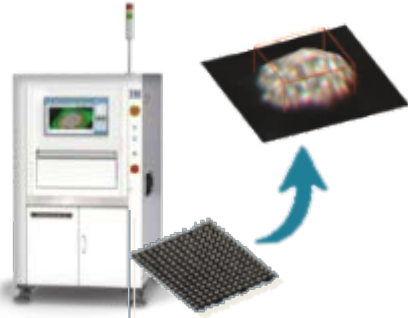


完整SMT檢測解決方案



Optical Inspection 光學檢測	SPI	<i>Solder Paste Inspection</i>
	AOI	<i>Automated Optical Inspection</i>
	AXI	<i>Automated X-ray Inspection</i>
Board Test 電測	BT	<i>In-Circuit Tester (ICT) Manufacturer Defect Analyzer (MDA)</i>

半導體製程/先進封裝檢測應用產品



TR7007Q SII-S
3D SEMI
錫膏/凸塊檢測
(SPI/SBI)



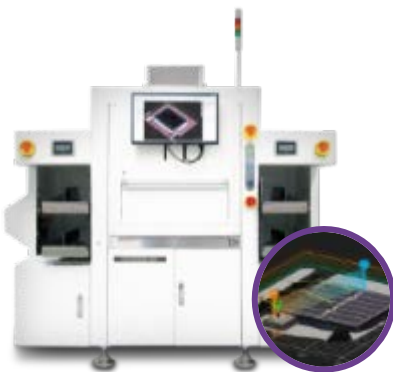
TR7720S
2D SEMI
AOI



TR7700Q SII-S
3D SEMI
AOI



TR7950Q SII
晶圓檢測與量測
框架, 凸塊, 表面 TSV
潔淨室 class 100



TR7900Q SII
彈匣 & 載板
3D Semi AOI
潔淨室 class 1000



TR7900Q SII-R
彈匣 & 載板 + 複判站
3D Semi AOI
潔淨室 class 100

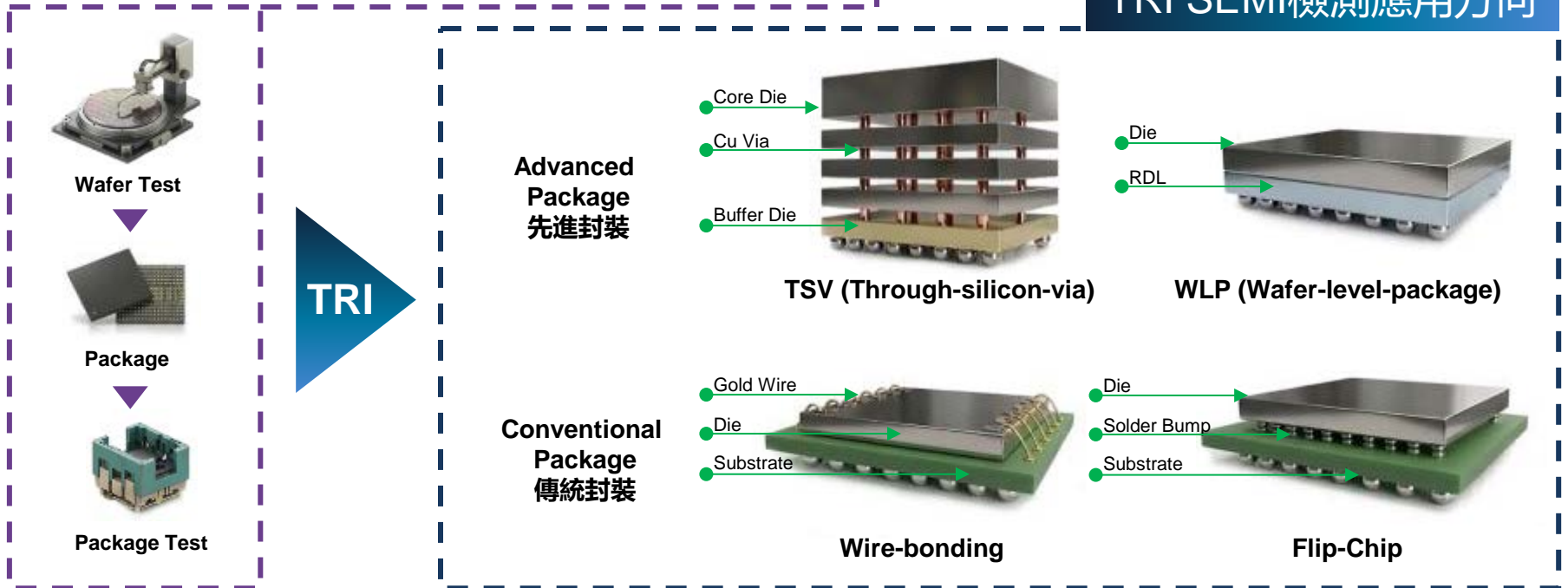


TR7600 Series
3D Semi X-Ray
Cu-Pillar, C4 Bumps, TGV

TRI半導體製程/先進封裝檢測應用



TRI SEMI檢測應用方向



TRI半導體製程/先進封裝檢測應用



強大演算法



AI驅動檢測



微距量測



多重感測器



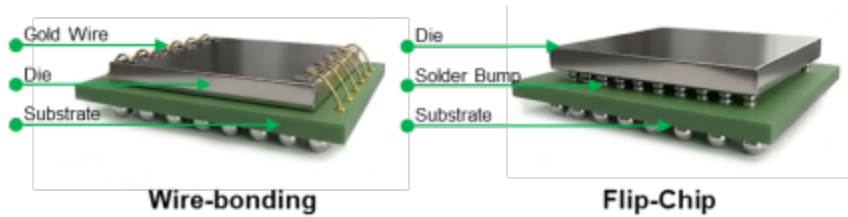
矽穿孔 /
薄膜量測



SEMS/GEM

SEMI 通訊
標準

傳統封裝

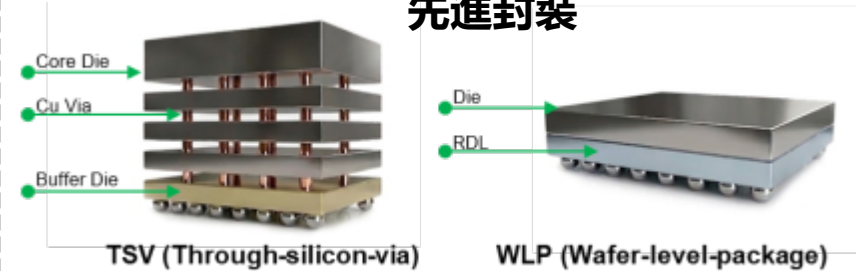


Wire-bonding

Flip-Chip

- › System-in-Package (SiP)
- › Inner Crack / Chipping
- › Surface Topography & AVI
- › Die Underfill, Glue, Epoxy & Flux
- › Solder Bump
- › Wire / Die Bonding
- › Dimension Measurement

先進封裝

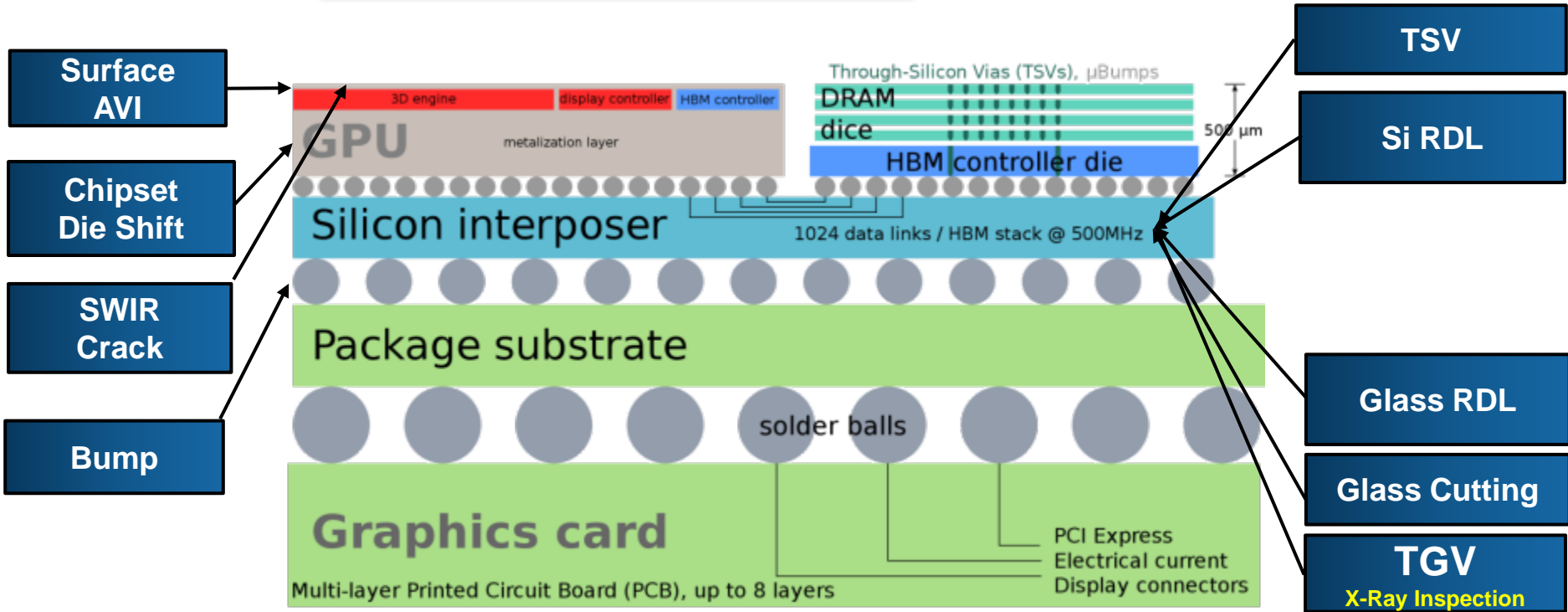


TSV (Through-silicon-via)

WLP (Wafer-level-package)

- › Chiplet & Chip-on-Wafer (CoW)
- › Advanced Wafer-Level Packaging (WLP)
- › TSV Metrology / TGV Inspection
- › μ Bump & Cu Pillar
- › Inner Crack / Chipping
- › Surface Topography & AVI
- › Thin Film Thickness
- › Sawing Trench
- › RDL

TRI在半導體先進封裝之檢測機會



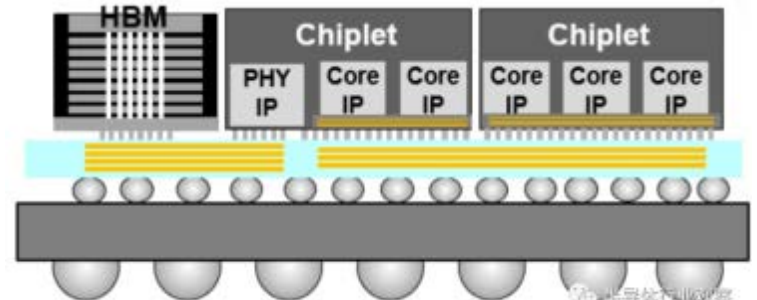
TR7700Q SII-S



TR7950Q SII



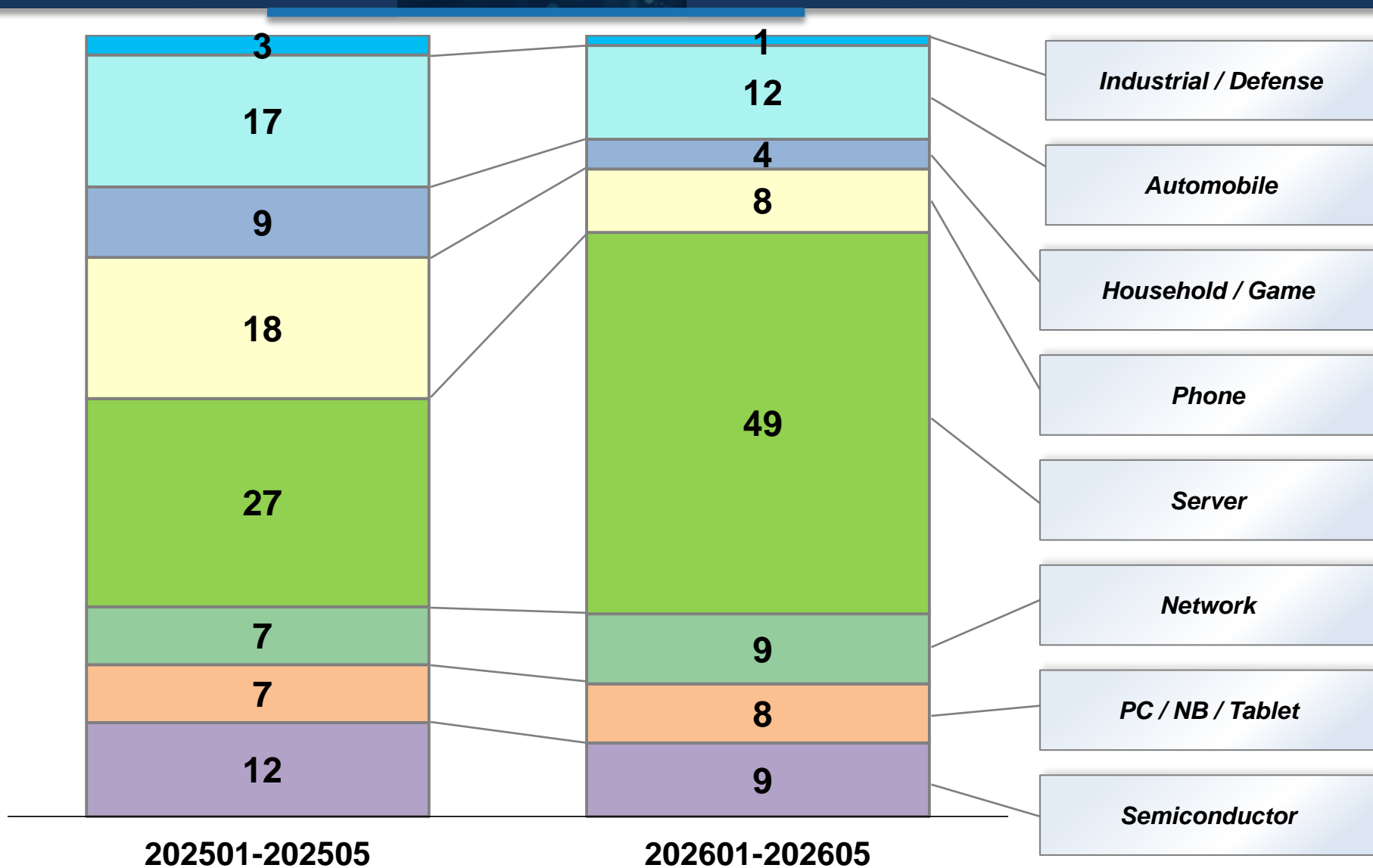
TR7600F3D SII Plus



主要競爭對手

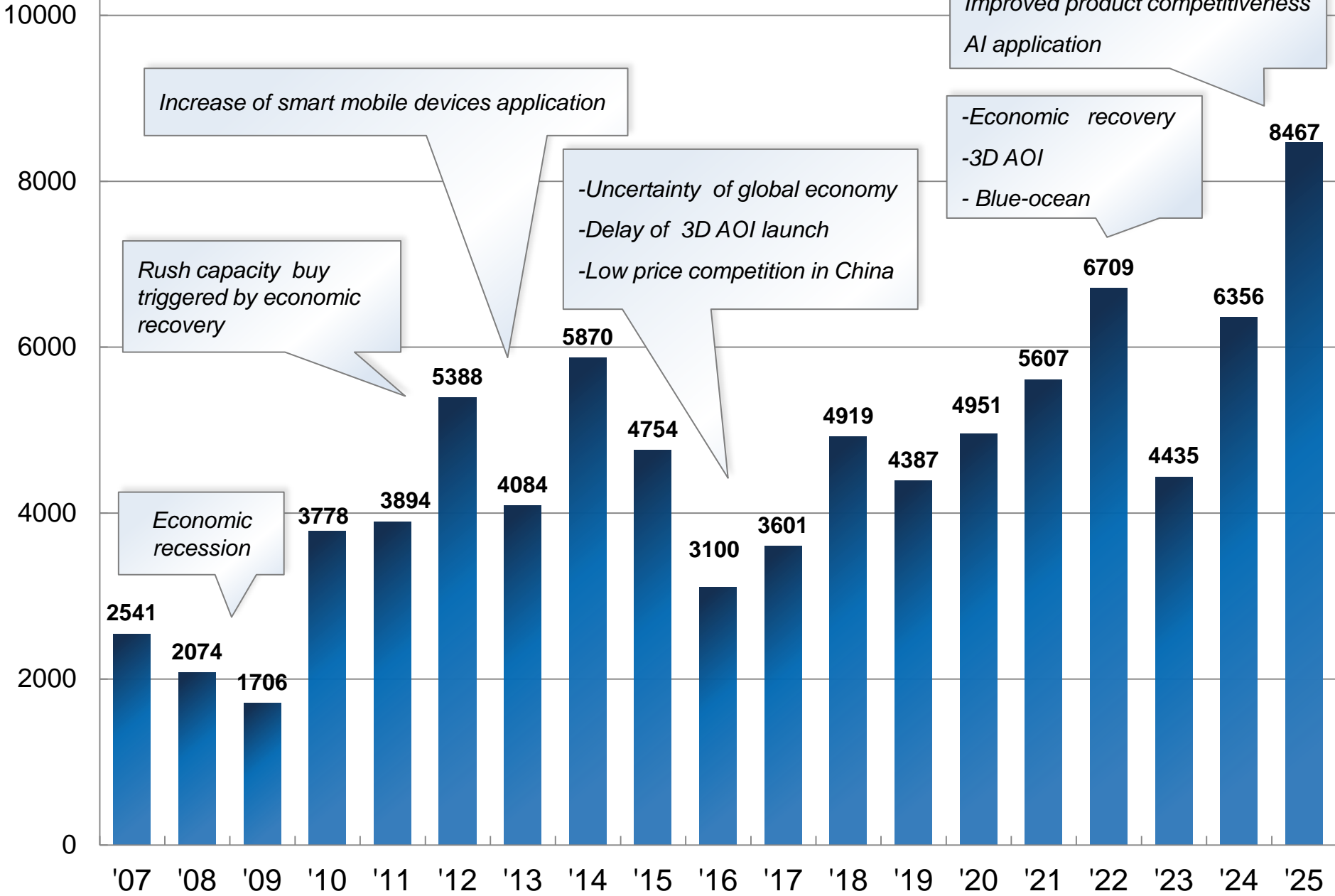
- 韓國: Koh Young/Pemtron/Parmi/Mirtec
- 日本: Omron/YAMAHA/Saki
- 中國大陸: Jutze/Sinic-Tek/Holly/Unicom/MagicRay
- 馬來西亞: Vitrox
- 美國: Keysight/Teradyne/MVP(SEMI)
- 德國: Viscom
- 義大利: SPEA
- 以色列: Camtek(SEMI)

產業別營收比例

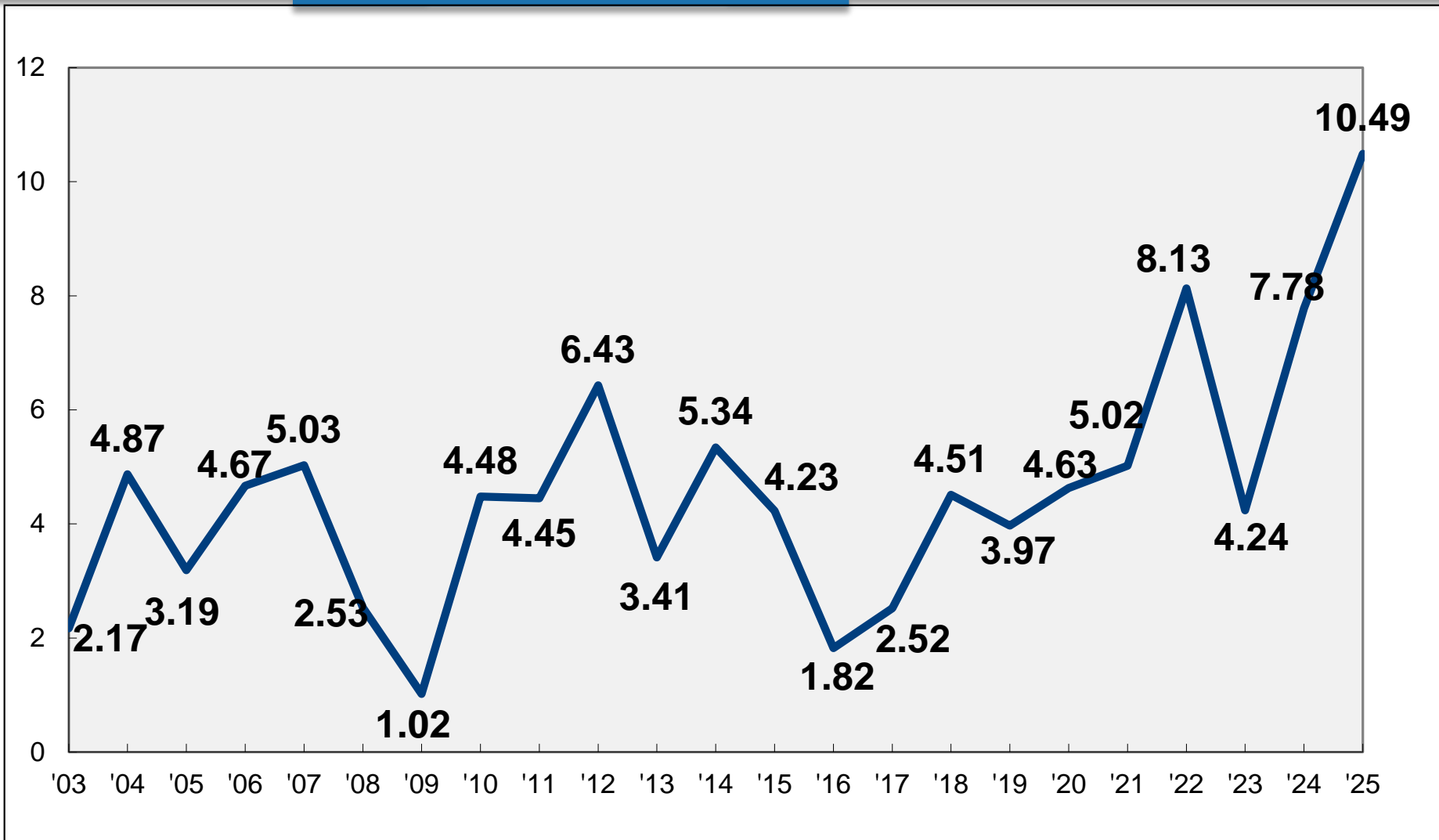


年營收

台幣百萬

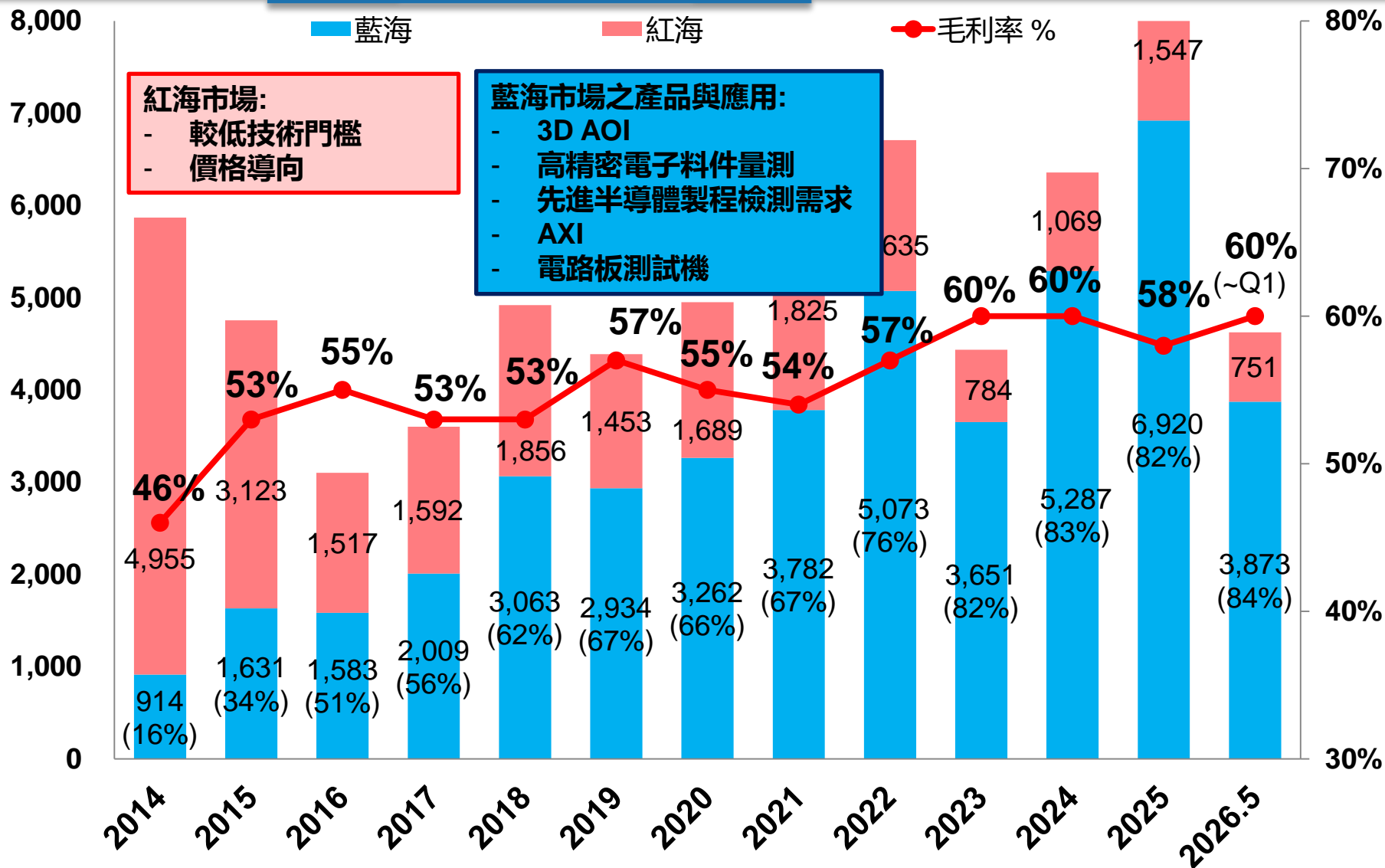


每股盈餘 (EPS)



紅海與藍海市場營收變化

台幣百萬



業界趨勢發展

2026 - 2027



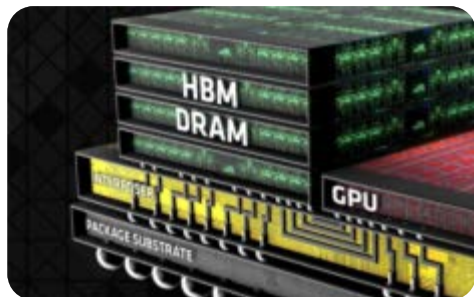
資料中心
AI伺服器



通訊
AI應用伺服器



低軌衛星



HBM / DRAM
高記憶體需求



EV 電動車
功率模組



自動化
關燈工廠

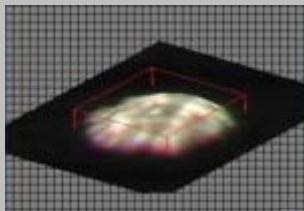
光通訊產業相關檢測機會

CPO Industry



SPI

Bump Inspection

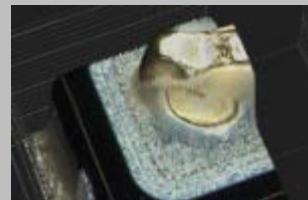


80 μ m Diameter



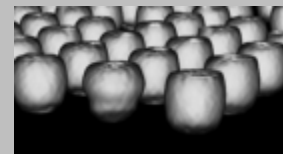
AOI

Inspection for:
Wire Bonding, AI Segmentation,
Surface, Golden Fingers, Glue,
Solder Joints, Foreign Material, OCR



AXI

Bump Inspection



HiP & Void Detection

TRI重點發展新產品



General消費性應用



Automotive車用 - Telecom通信



Medical醫療 - SEMI半導體



SPI

SMT

TR7007Q SII DL, TR7007 SIII

SEMI

TR7007Q SII-S



AOI

SMT

TR7700Q TB SII, TR7700QH SII

SEMI

TR7950Q SII



AXI

SMT

TR7600FB SII, TR7600 SV

SEMI

TR7600 SIII Plus, TR7600F3D SII Plus



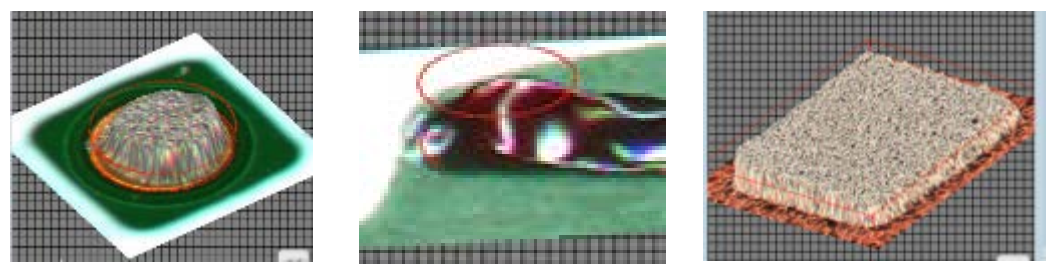
ICT

TR5001 SII Series
TR8100 SII, TR8100L SII INLINE

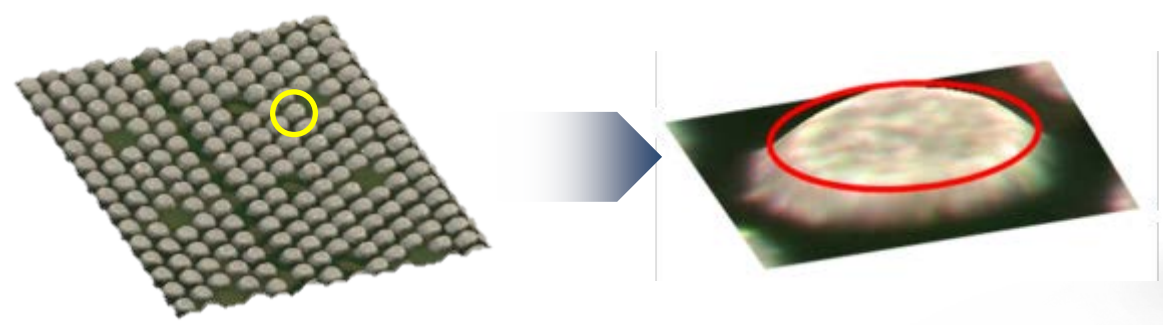


TRI SPI 新應用發展

SMT



SEMI



Solder Paste, Mini-Bumps, Glue, Flux, Mini LED Solder, Bare Board / Pad, Foreign Material

TRI 3D AOI 優勢



AI驅動演算法



計量測量



多重3D技術



智慧化
程式設計



正 / 背面 檢測



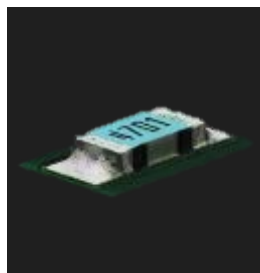
側面檢測



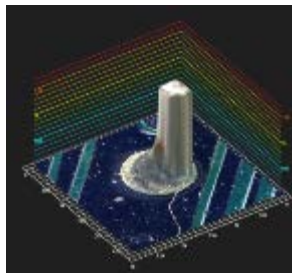
動態掃描/
走停式



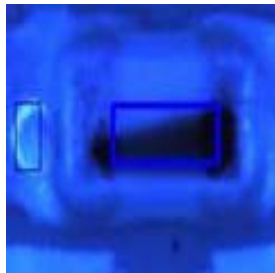
智慧工廠
解決方案



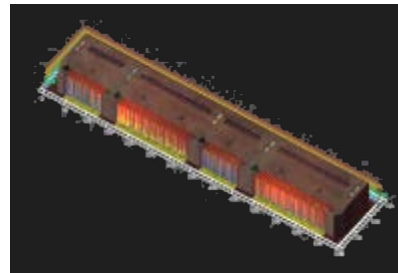
SMD



Pin



UV Coating

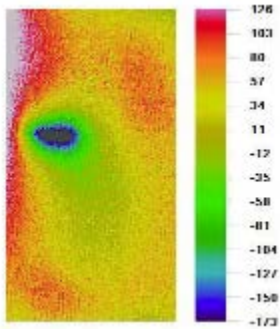


Connector

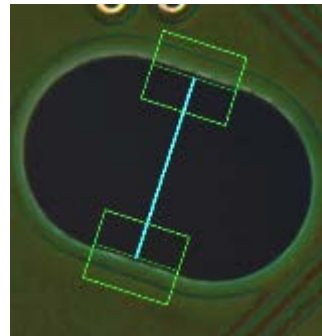


AOM – 光學量測功能

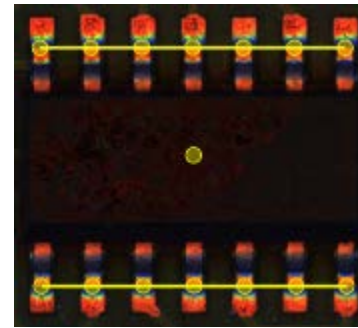
可輕鬆建立包含尺寸量測、檢測參數與真實量測值的公式，以實現更精準的檢測



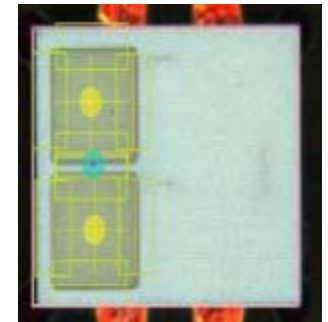
Panel Flatness
3D Map Data



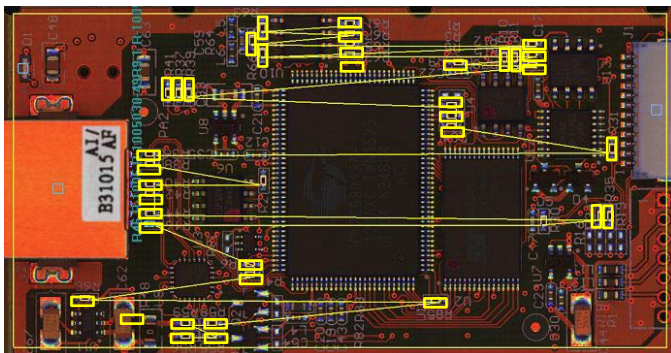
THT Hole Diameter
Measurement



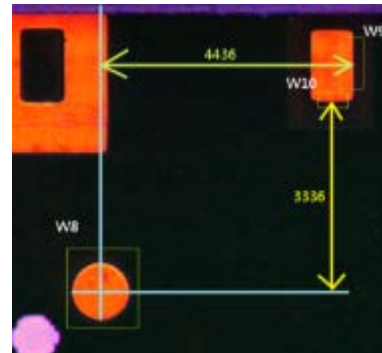
Panel Flatness
3D Map Data



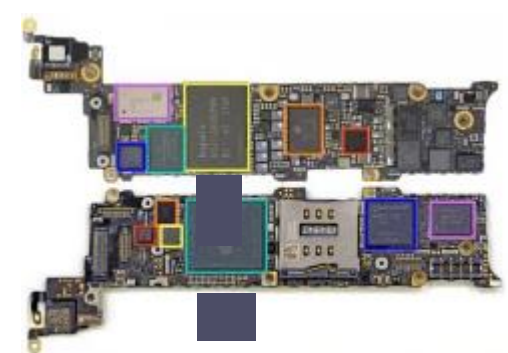
LED
Measurements



Linear Measurements
between Components

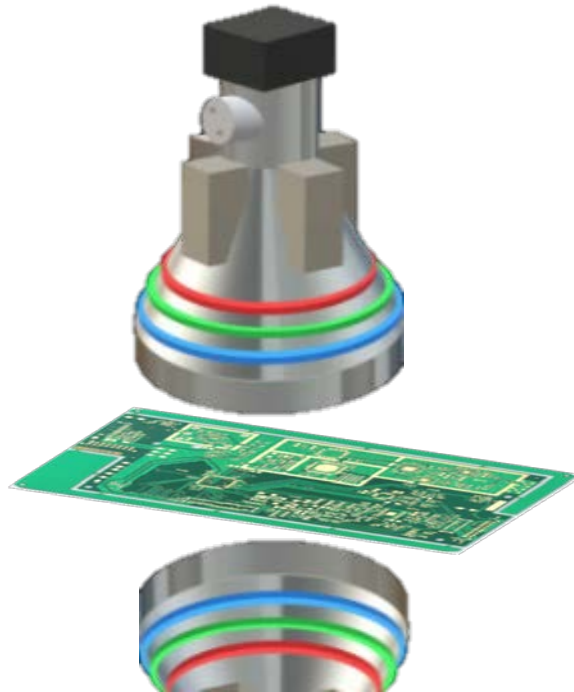
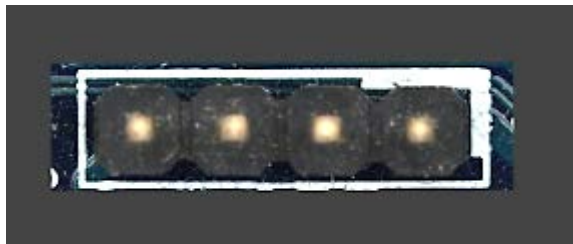
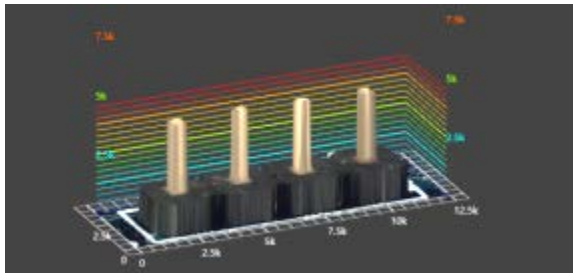
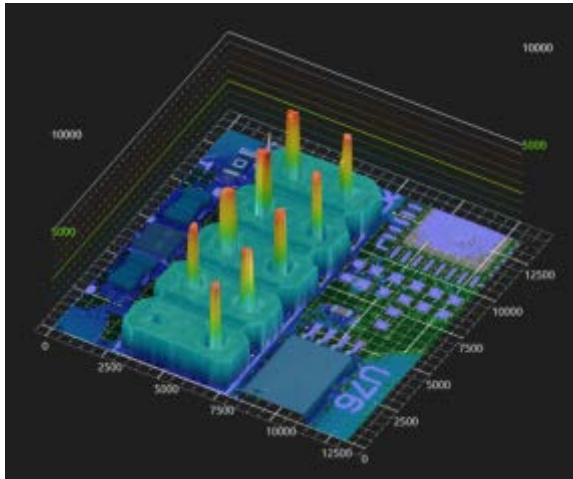


Measurements
Using FM

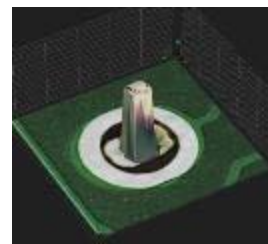
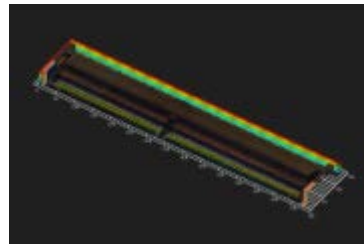


Measurement between
Components

新推出 – 上/下視 AOI



TR7700Q TB SII
Top 3D, Bottom 2D
AOI



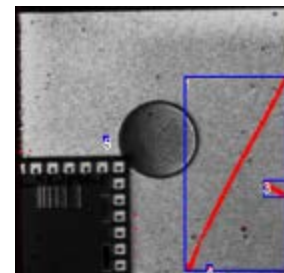
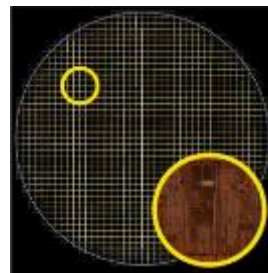
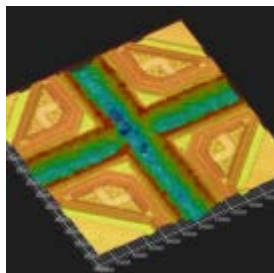
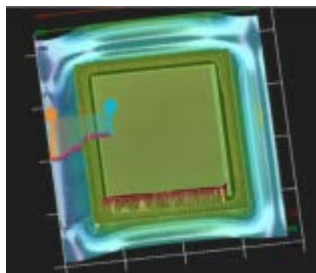
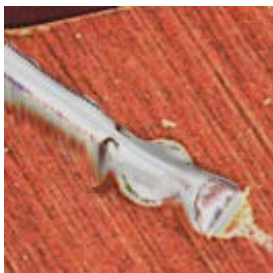
半導體檢測與量測應用平台



TR7900Q SII
後段封裝平台



TR7950Q SII
晶圓檢測平台



TRI AXI 優勢



TRI offers TOP and BOTTOM tube solutions

2-30 μm

多重解析度
Multi-Applications



AI應用

Programming Phase
Inspection Phase
AI Image remove noise
Repair Station Review Phase



大數據
應用



多平台選擇

High Resolution: TR7600 Plus Series
High Speed: TR7600 SV Series
High Power: TR7600 HP



高CT切層數

Up to 1000 CT Slices



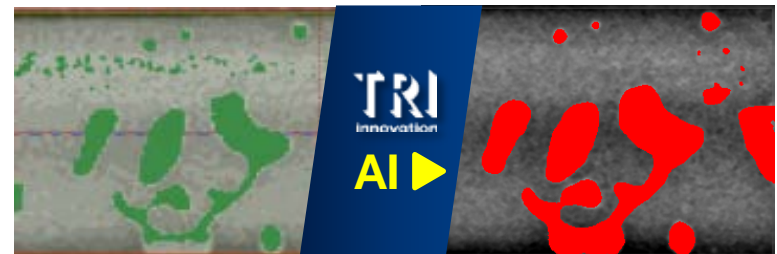
Up to 2100 x 510 mm

大板檢測

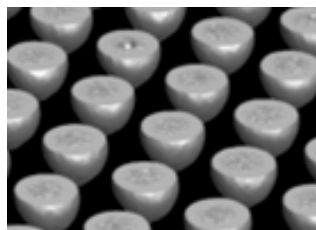
NEW



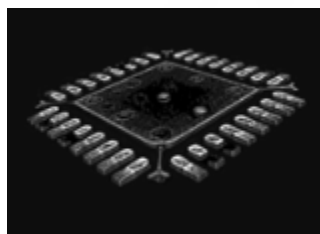
TR7600FB SII



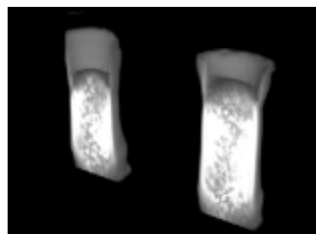
業界領先的 X-射線檢測方案 - 3D AXI



BGA



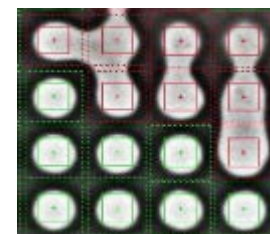
QFN



PTH/THT



Press-fit



Short

新推出 - TR7600FB SII 3D AXI



New Imaging Structure
for Clearer Images

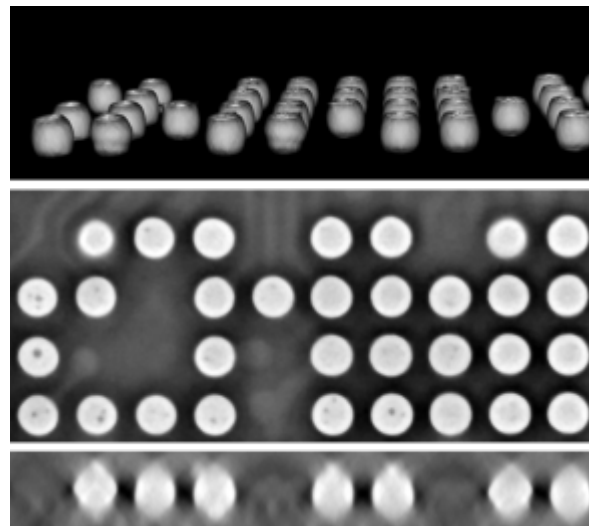
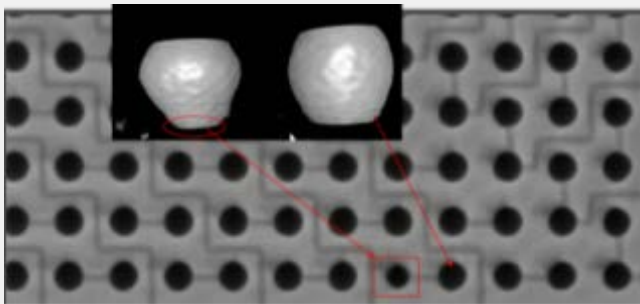


Robust Platform
High Speed up to 20 FOV/s



AI-Powered Solution

全新影像結構設計可應對多樣化的產品佈局，並針對特殊基板、BGA、多層結構、SiP、IC、CSP及覆晶晶片 (Flip-Chip) 進行了最佳化設計。



Product Page

TRI X-Ray 解決方案

High Speed 高速



Max. Speed: 383 cm²/s

Models:
TR7600 SV Series,
TR7600 SIII Series

Target:
Consumer Electronics

General Application:
Automotive Electronics, Server (Data Center),
Industrial Electronics, Telecom



High Performance 高效能



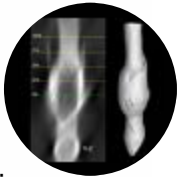
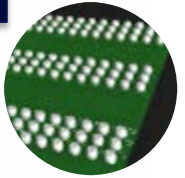
Resolution 5 - 30 μ m

Inspect for:
BGA, QFN, THT, Backdrill,

Models:
TR7600F3D SII Series
TR7600FB SII Series

Target:
Medical, Aerospace, Automotive

General Application



High Power 高功率



Max. Power: 180 kV

Model:
TR7600HP

Target:
Power Modules, IGBT,
Thick Boards, Inverter



High Resolution 高解析度



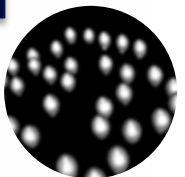
Max. Resolution 2 μ m

Smallest Defect: 14 x 14 μ m

Inspect for:
TGV, C4 bump and Cu-pillar

Models:
TR7600 SIII Plus,
TR7600F3D(LL) SII Plus

Target:
SEMI, OSAT, Chiplet, Advanced Packaging

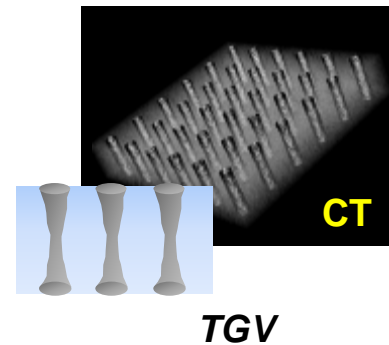


SEMI AXI 半導體檢測方案

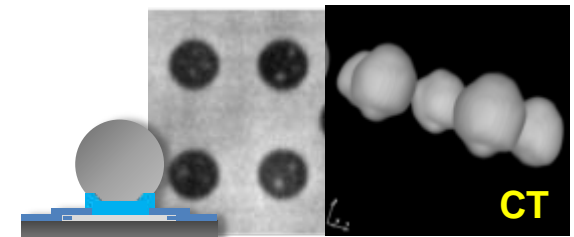


TR7600 SEMI Series

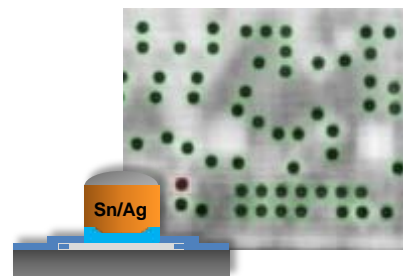
高解析度的 3D SEMI AXI
可滿足OSAT封裝應用產能需求



TGV



C4 Bump



Cu Pillar

ICT / Board Tester 完整電測產品線

高效能可模組化ICT



High Pin-Count
Up to 11,088 Testing Points



**Auto Calibration,
Self Diagnostics**



Board Size
Up to 920 mm



新推出 - TR8100L SII INLINE ICT



Data Center Industry Server Board Test

NEW



Testing Points

7,056 Optional: 11,088



Board Size

Up to 920 mm



Weight

Up to 8 kg



Thickness

Up to 5 mm



Max. Speed

800 mm/s



Product Page

智慧工廠應用及合作廠家



YMS
WEB

Yield Management System 4.0

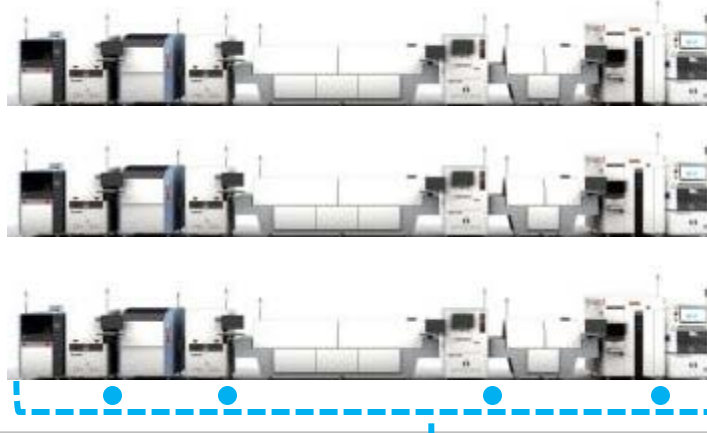
Dashboard
Real time SPC
Remote Alarms
Remote Control
Inspection Trends



M2M
機台通訊

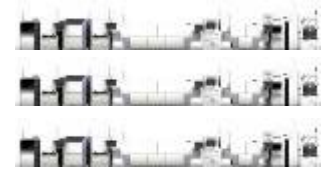
Industry 4.0 Standards
MES Customization
Closed Loop

Factory 1



可共用
程式庫

Factory 2



AI Verify Host
AI Repair Station



AI Station

Panasonic

MPM



GKG

ASM
Assembly Systems

YAMAHA

FUJI

Universal
Instruments

DEK

EKRA
Coarse Finishing Technologies

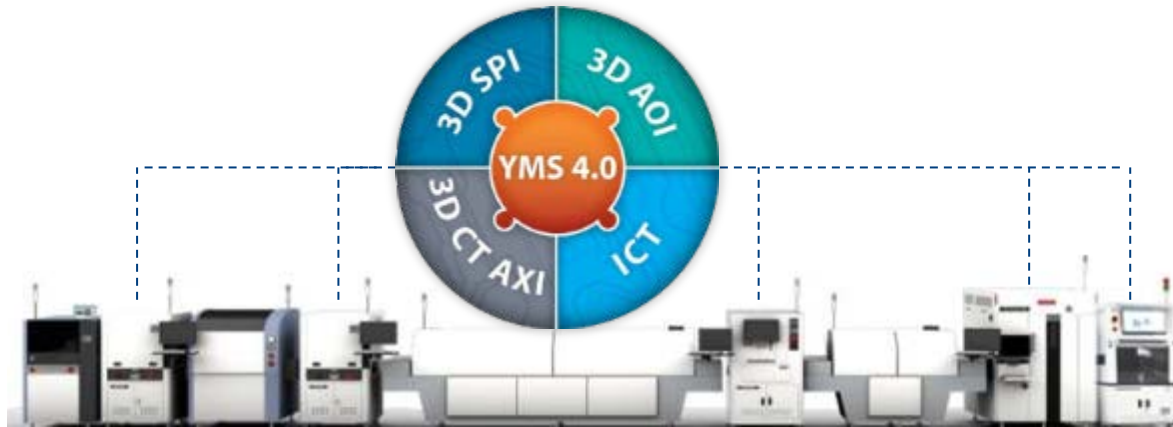
Minami

ESI

TRI YMS 4.0 良率管理系統

協助客戶提升生產力及品質管理

TRI
Innovation



Defect Image Analyzer



Line View Monitoring



SPC Trends Report

YMS 4.0 WEB



Industry 4.0 Solution

Real-Time Inspection Status

Improvements in Monitoring and Quality

Output Reports to MES/SFCS

PDCA Cycle

SPC and Productivity Monitoring

Top Defects with Images

Issue Tracking

TRI AI 生態系/解決方案



Programming Phase 編程階段



AI 智慧編程

Reduces setup time and minimizes downtime.



AI 微調

Automatically provides the best inspection parameters.



Inspection Phase 檢測階段



AI 缺陷檢測

Accurately identify defects in AOI, AXI, and SPI.



AI 工作站

AI Inference Platform.
Deploy AI to multiple lines.

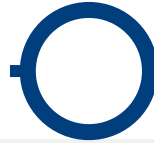


AI 訓練工具

Generates and customizes powerful AI models.



AI 自動對焦



Repair Station Phase 覆判階段



AI 校驗主機

Automated defect judgment at the smart repair station.
Reduces the workload of manual Re-Inspection.



AI 影像降噪 (AXI)

近年獲獎及認證

ASE 日月光投控 – 最佳供應商獎



OSE 華泰電子 – 傑出供應商獎



Bosch AI MEMS 認證



近年獲獎及認證



Company Milestones



2023

EM Asia Innovation Award: TR7007 SII Ultra & TR7500QE Plus

2024

TRI honored with: ASE Supplier Award.

EM Asia Innovation Award: Best Supplier, TR7700QH SII, ...

Bosch AI MEMS Certification

2025

TRI certified: SEMI E187

OSE – Outstanding Supplier Award

Circuits Assembly NPI Award: TR7600 SV Series, TR8100 SII

EM Asia Innovation Award: AI Verify Host & TR5001E SII

Global Technology Award: TR8100 SII

2026

EM Asia Innovation Award: AI Verify Host & TR5001E SII

內部研發團隊

- Optical Dept.
- Mechanical Dept.

- System S/W
YMS, R/S

- PLC control
- Lighting control

光學檢測

電路板測試

250+
R&D

外部機構技術支援

Department of Computer science, 台灣大學
- 影像處理 / Understanding

Department of Power Mechanical, 清華大學
- X-ray 3D Reconstruction/Digital Tomosynthesis Algorithm/電腦切層演算法

Center of Measurement Standards, 工研院
- Length/ Camera / 色彩校正

免責聲明

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