

Innodisk Corporation (Symbol: 5289) 2018 Institutional Investors Conference

Randy Chien, Chairman
April 10, 2018

The logo features the word "innodisk" in white lowercase letters on a red rectangular background. A small red square is positioned above the right side of the red rectangle.

innodisk

Disclaimer

This file and the financial information and forecast information are based on information obtained by the company from internal and external sources. The actual operating results and financial conditions of the company may differ from these predictive sets of information due to various uncontrollable factors.

The viewpoints in this file reflects the company's opinion on the future by the current date. If there are any changes or adjustment in the future, the company is not responsible for notifying the reader or updating the content.



About Innodisk

Innodisk is a service-driven provider of industrial embedded flash and DRAM modules, Server DRAM, embedded peripherals products and technologies, with a focus on the enterprise, industrial, cloud, and aerospace and defense applications.

Agenda

- Company Profile and Overview
- Product and Technology
- Market trends and strategies
- Financial information
- Q & A

Company Profile and Overview

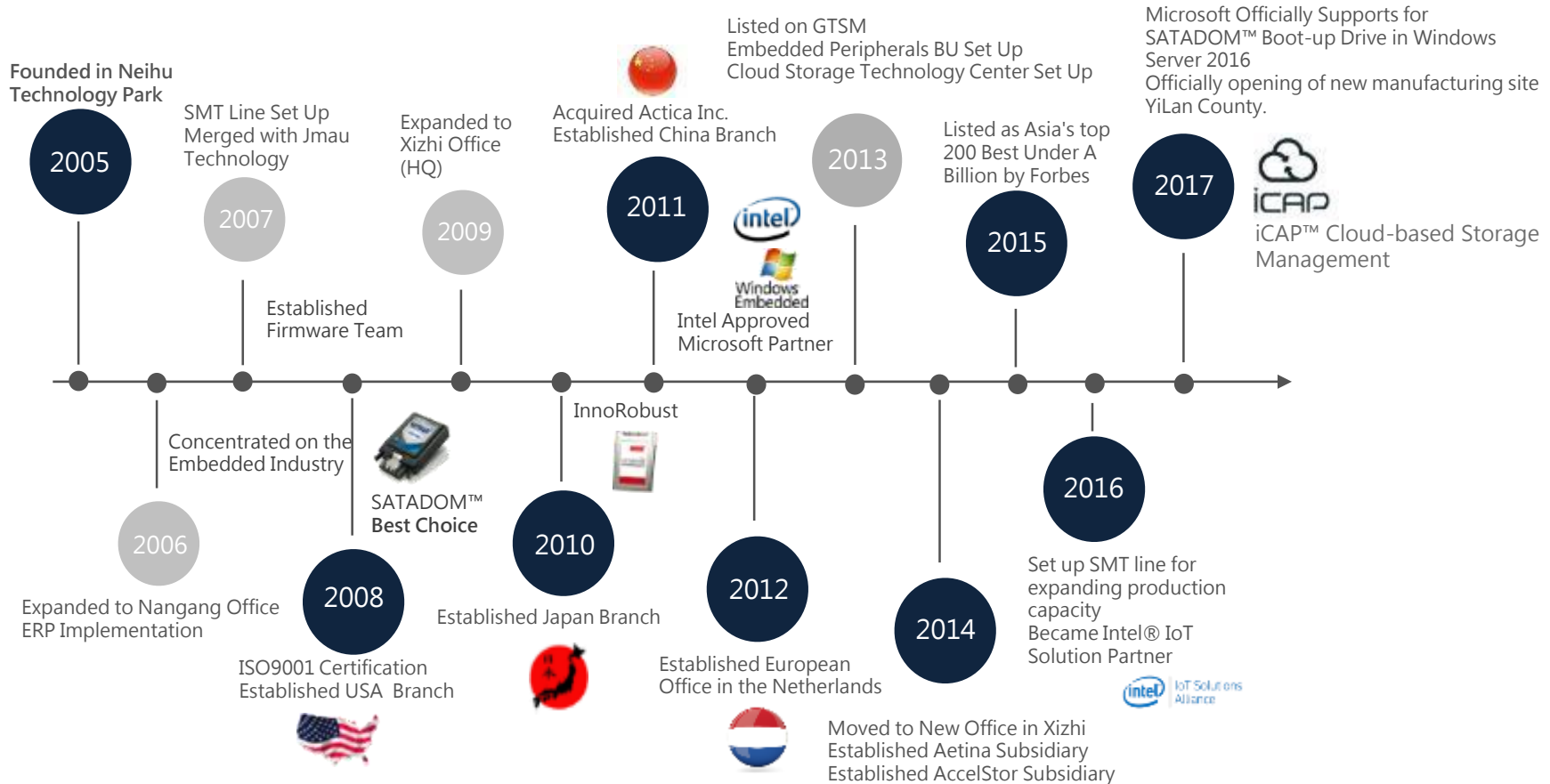


Established	2005
Capital	USD \$24.8M (2017)
Revenue	USD \$220M (2017)
Patents	82
Capacity	1,200K/M (2018)

Main products:

- Industrial SSD
- Industrial DRAM
- Embedded peripheral

Milestones



Worldwide Presence

innodisk

Fremont

New Jersey

Eindhoven

Chengdu

Shenzhen

Beijing

Shanghai

Tokyo

Headquarter, Taipei

F/W Center, Hsinchu

RD & Production center, Yilan



8 Branch offices



600 Employees
(Taiwan 507, Overseas 93)

R&D and Production center

innodisk



MP by 18' Q2

Area
13,000
m²

Stage 1
production capacity

600K
SMT x 4

Max. production
capacity

1.8M
SMT x 12

Product and Technology



Technical Aptitude by Design

Our advantage lies in our portfolio of hardware, software and firmware technology and how we arrange these basic building blocks into new works of innovation.

Deeply Rooted in the Market

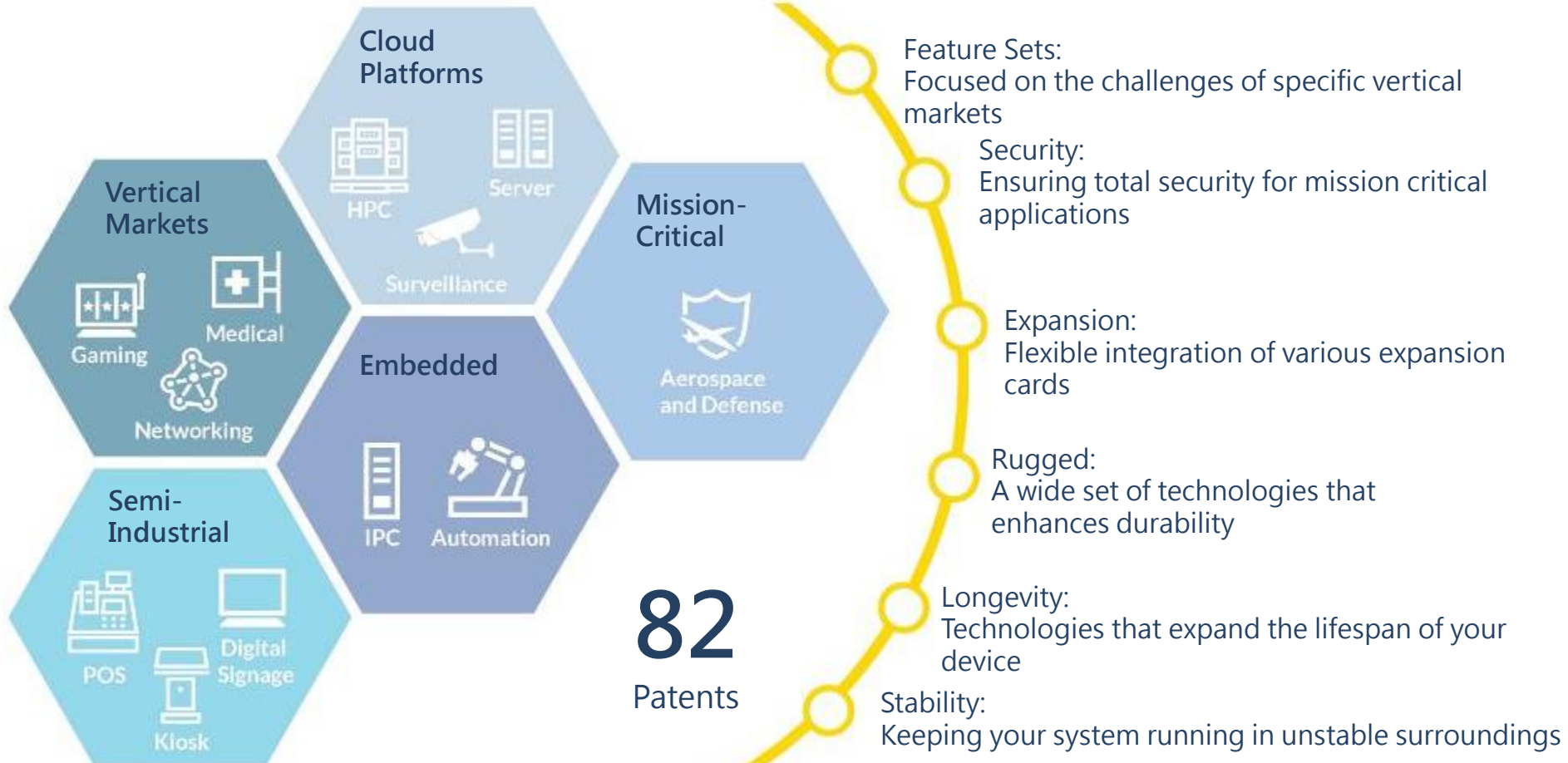
The awareness of the pit falls and opportunities of vertical markets allow us to view the full picture when crafting the optimal solution.



We Are in It Together

To reach the optimal solution, working together with our partner from day one is paramount. The best possible outcome can be managed by developing solutions jointly.

Applications and Technologies

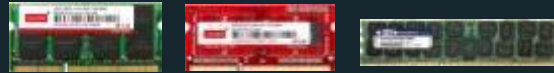


Business Coverage



EP

mPCIe Storage / Communication /
Display Modules / RAID Cards



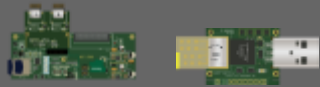
DRAM

Embedded / Wide Temp./ Coating / Server



Flash

SSD/ SATADOM /M.2



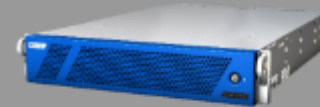
Mr. Loop

WiGig Wireless
Communications



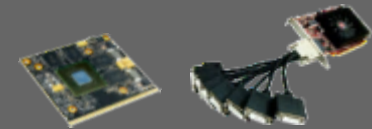
Antzer Tech

In-vehicle
Communications



Accelstor

All Flash Array

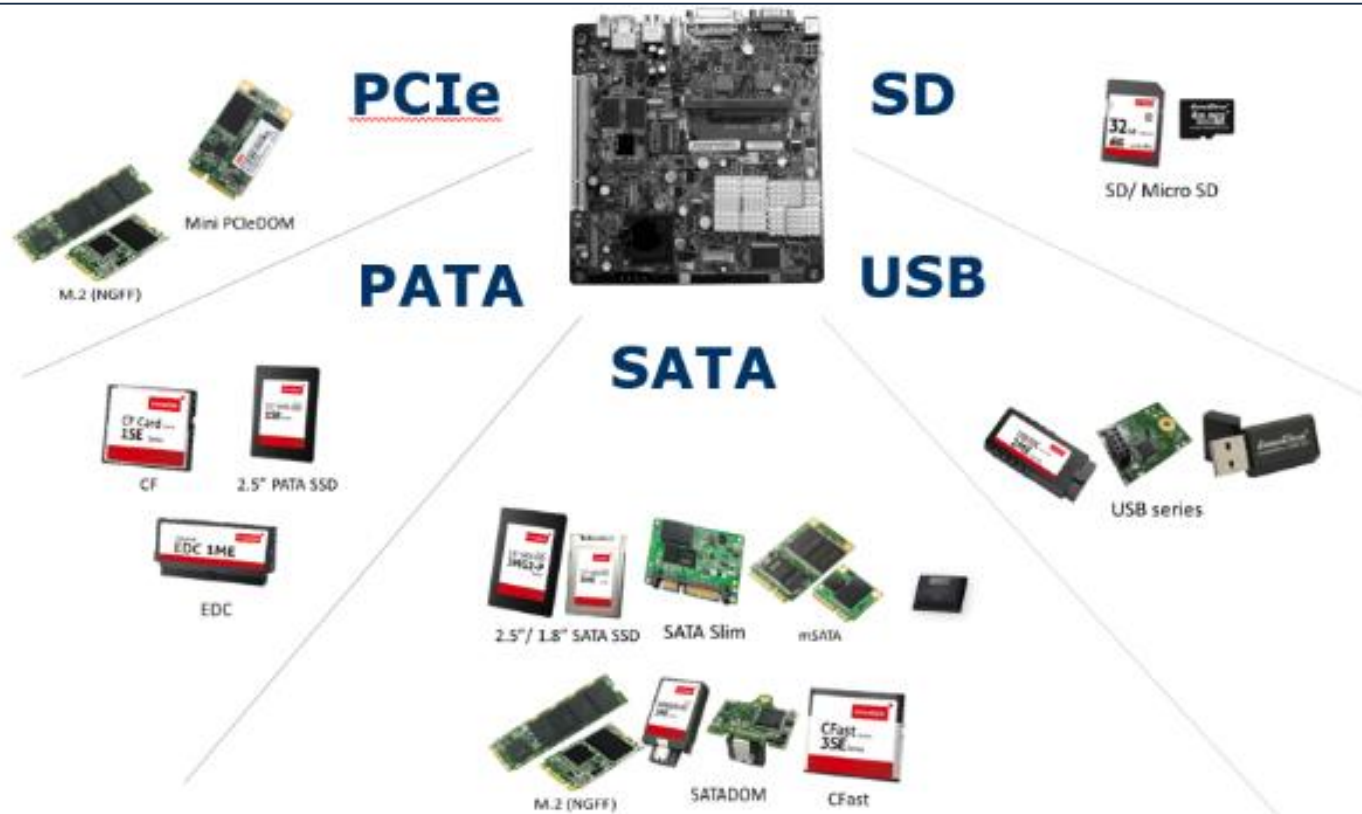


Aetina

Industrial Graphic
Cards



Flash – Complete Storage Solutions



SLC

MLC

3D TLC

3D NAND Products

- ✓ Complete product line
- ✓ Industrial-grade solution
- ✓ Leading wide temp. products



Industrial Flash – NVMe product line

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M.2

A rapidly growing form factor. Follow by SATA I/F, offering NVMe solution to the industrial and embedded market



CFexpress

Promoted by industry leaders as an excellent contender to fulfill the requirements of automation and gaming applications



OCuLinkDOM™

Industry first OCuLink interface drive – the next generation of server boot drives



Mainstream



Future



Industrial DRAM – Purpose-built Memory Modules

Embedded Memory

Product:

- DDR4 UDIMM
- DDR4 SODIMM
- DDR4 Very Low-profile

Feature:

- Using only the highest quality Original IC
- Industry-first DDR4 2666 embedded memory

Server Memory

Product:

- DDR4 2666 RDIMM
- DDR4 ECC Very Low-profile
- DDR4 ECC DIMM
- DDR4 Mini DIMM

Features:

- Implemented ECC function
- Stringently tested with the in-house designed testing tool iRAM

Extreme Environment Memory

Product:

- DDR4 XR-DIMM
- DDR4 WT DIMM

Feature:

- Gold finger 30μ"
- Original wide temp. IC

Industrial DRAM – The Focus of 2018



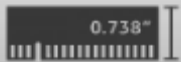
Anti-Sulfuration

- ✓ Establish **New Industry Standard**
- ✓ Quality upgrade **No Added Cost**



2666

- ✓ Launching embedded series **Leading Position**
- ✓ Intel's latest platforms **Full Compatibility**



Wide Temp.
VLP*
(Very low-profile)

- ✓ DDR4 WT very low-profile **Industry 1st**
- ✓ New opportunities in the **5G Market**

Anti-Sulfuration Products

• Our Advantages

The most complete DDR4 product range with anti-sulfuration features

Upgrade DDR4 product series with anti-sulfuration feature with no added cost

Conforms to the test standard ASTM B809-95

Optional enhancement of robustness with side fill and conformal coating is available

• Applications

- Hostile environments :
Volcano, Mine pit, Air pollution, etc.



- Embedded & Server markets: Datacenter, In-vehicle, Energy, Networking, etc.



Embedded Peripheral – Complete I/O Expansion Solution

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2.5"

Communication

CANbus 、 PoE 、 Ethernet 、 Serial 、 Digital I/O



PCIe

Storage

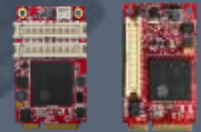
SATA 、 USB



mPCIe

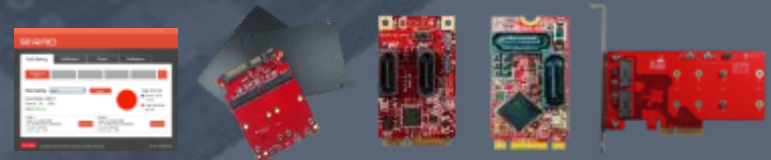
Display

VGA 、 HDMI 、 DVI 、 LVDS



RAID

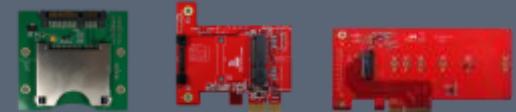
RAID 0 、 RAID1



M.2

Testing tool

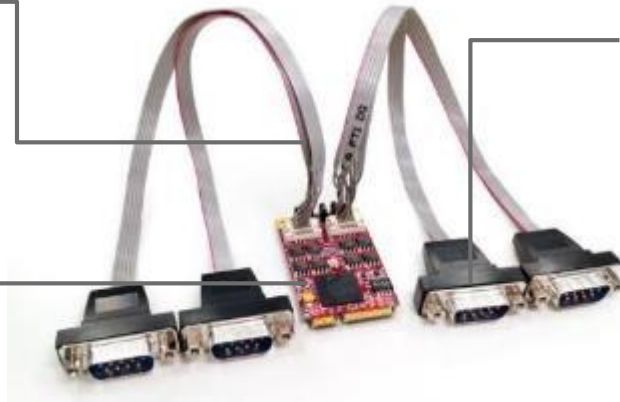
mPCIe 、 mSATA 、 M.2 、 CFast 、 SATADOM 、 CF



Embedded Peripheral Design Principles

H/W design

- Industrial grade components
- Safety Certification
- Wide Temp. grade

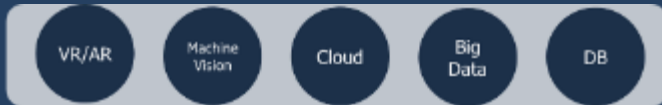


S/W integration

- Embedded operating system
- Software customization
- APP and API



Intelligent Solutions Rooted in Applications



H/W



F/W



S/W

Smarter Storage

- Optimizing for Different Scenarios & Emphasizing Customization
- Providing Integration between HW, SW and FW & offering timely surveillance data

Cloud Storage

- Centralized Management of Data, Simplified Data Gathering and Sharing
- Remote device management and operation

Challenges of the Future

Data

Difficulty in acquiring relevant data from devices as well as sufficient information for data analysis

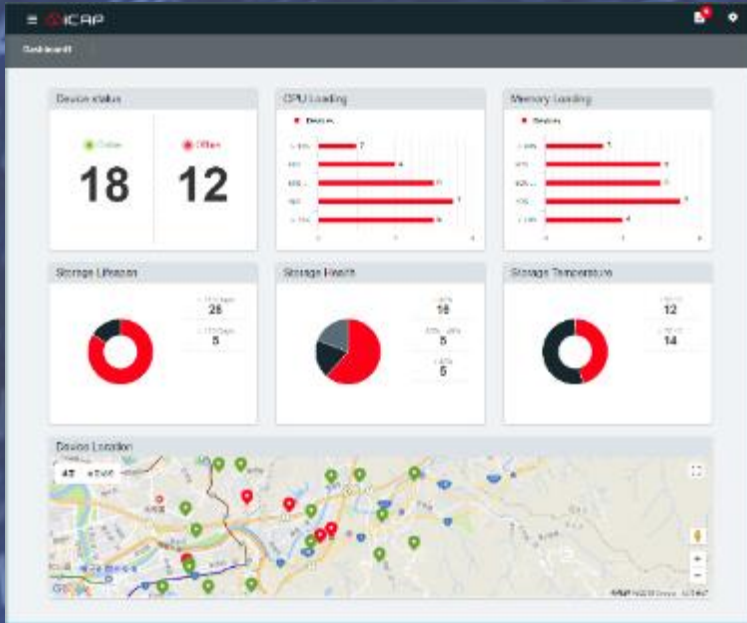
Storage Lifespan

How to reliably assess the deteriorating health status of storage devices

Remote Management

How to efficiently use limited information to manage widely dispersed devices

Cloud Storage Applications



iCAP™ is a browser-accessed management platform optimized for IoT applications. It allows for easy management of connected devices and monitoring of storage status. It can also predict remaining storage lifespan, as well as execute immediate system recovery – working towards the goal of zero system downtime.

Case study – HCI (Hyper-Converged Infrastructure)

Hyper Converged Server

SATADOM[®] continues gaining acclaim in the server sector and is now being used as a server boot drive for hyper converged infrastructure

Pin7

Innodisk
Patent

AVL

Widely
Recognized

- Patented cable-less power, small form factor and high capacity
- Strict data integrity requirements
- Long lifespan and high reliability



Case study – In-Vehicle & Surveillance

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Vehicle Surveillance

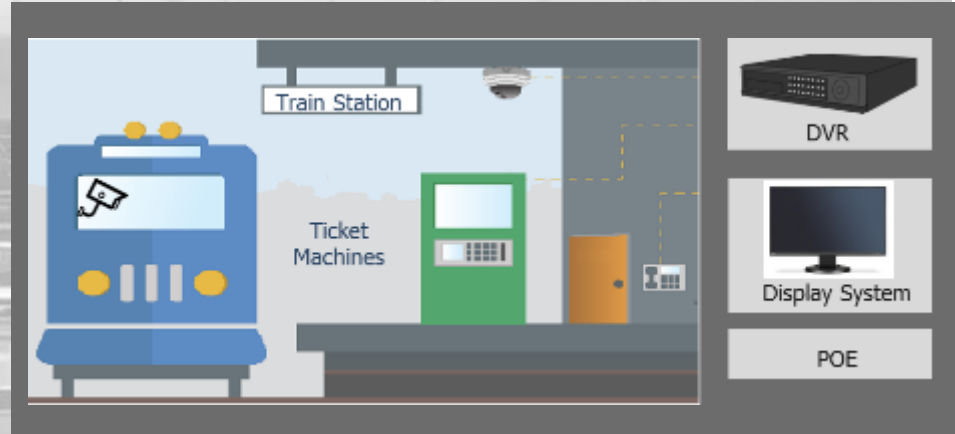
Optimized firmware for train station and onboard surveillance systems



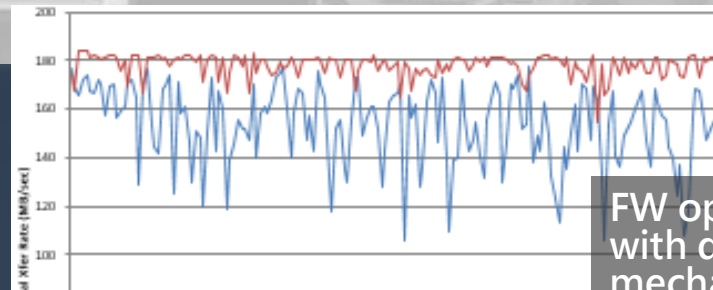
Wide
Temp

REC Line

Smart FW



- High capacity SSD
- Stable and linear writing behavior
- Abrupt power loss protection



FW optimization
with dispersal
mechanism

Case study – Defense & Security

UAV and Data Security

Durable devices that conforms to multinational standards for data erasure



Secure Erase



Backup

- Conforms to multinational standards for data erasure
- Extreme data security and reliability
- Suitable for extreme environments

Case Study – Absolute Integration

Complex System Monitoring and Management

Managing extensive automation system with iCAP – Lowering Costs and promoting ease of use



- SW binding platform and SSD together
- OS building and Optimization
- Customized design – One-click Recovery

Application

Requirements
HW&SW
Integration

=

SW / FW

FW Customization
SW Tech Support
SW Optimization &
Integration

+

HW

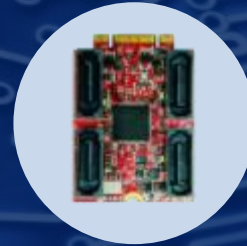
HW Customization
HW&SW
Integration

Market trends and strategies

IPC Design Trends

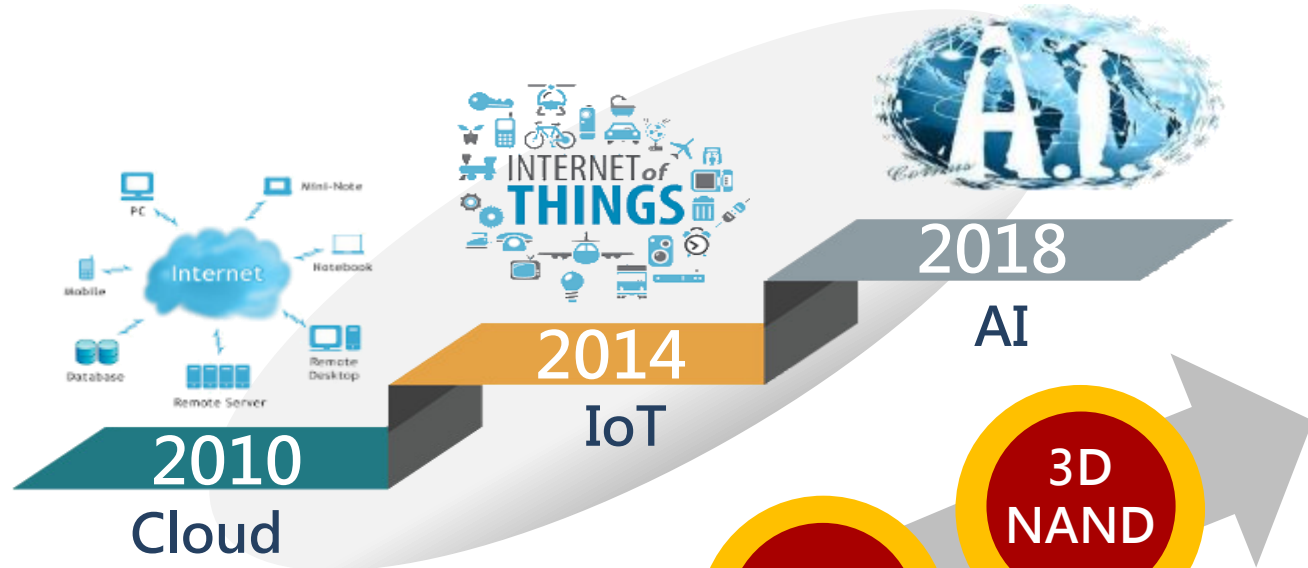
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- Device Miniaturization
- Digitization
- Management Moving Online
- Linking IoT and Big Data

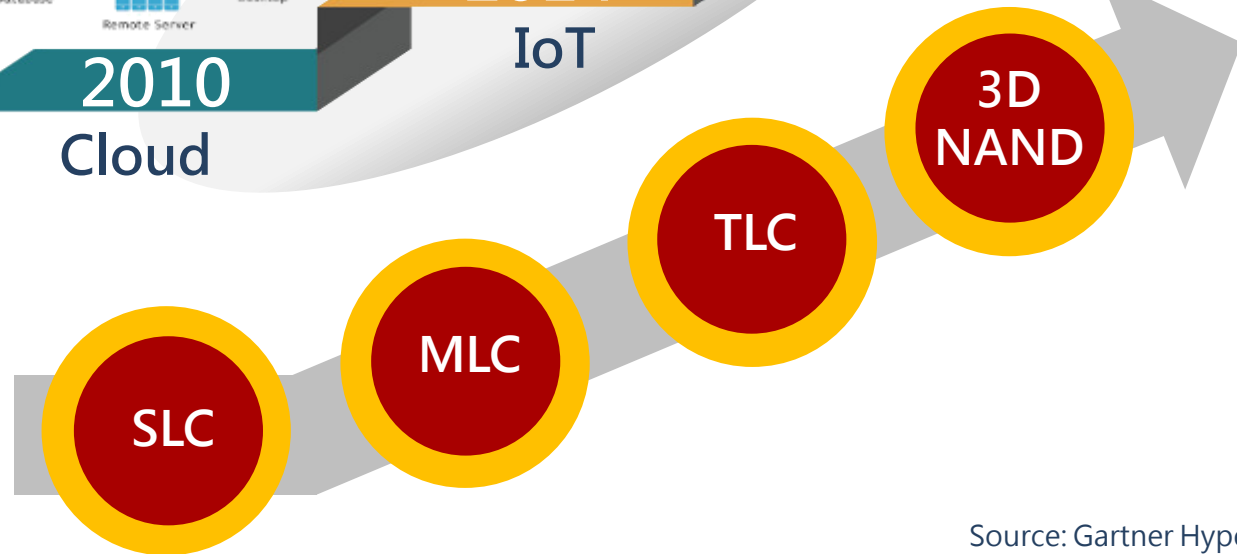


Market Trends and Strategies

Application
Technology



Storage
Technology



Market Trends and Strategies

Absolute Integration

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車載市場

全球車載市場正以每年4.4%成長率擴張，預計於2030年達到6.7兆美元規模。

航太與國防

全球的航太以及國防物聯網應用產業，正以複合年均增長率11.8%成長，並將於2023年達到40.9億美元商機。

Rooted in Applications Expanding in the Industrial And Embedded Market

安全監控

安全監控及遠端影像監控應用服務 (VSaaS) 市場，正以複合年均增長率高達17%的速度大幅成長中，並將於2024年達到800億美元的市場規模。

伺服器

自2016年起，機架式伺服器市場以複合年均增長率19.95%的速度成長，預計2021年全球可達905.6億美元商機。

Market Trends and Strategies

Absolute Integration

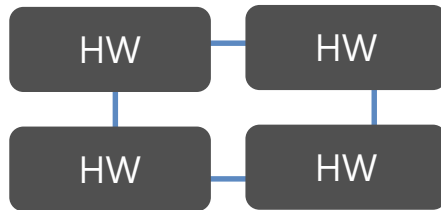
AI + IoT...



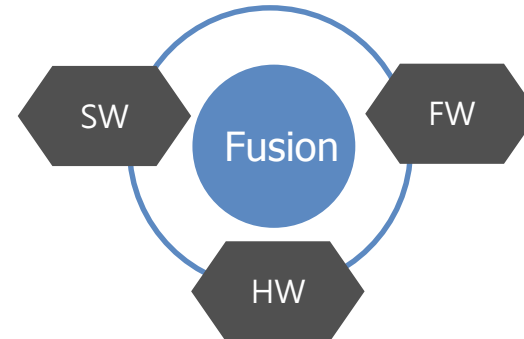
New Industrial Era – New Value Network

For future IPC applications, the main emphasis should be on how to increase our product value and how to grow our competitive edge

Traditional Market Value System



The New Market Value System



New Generation New Thinking

Hardware and Software Integration

SW :

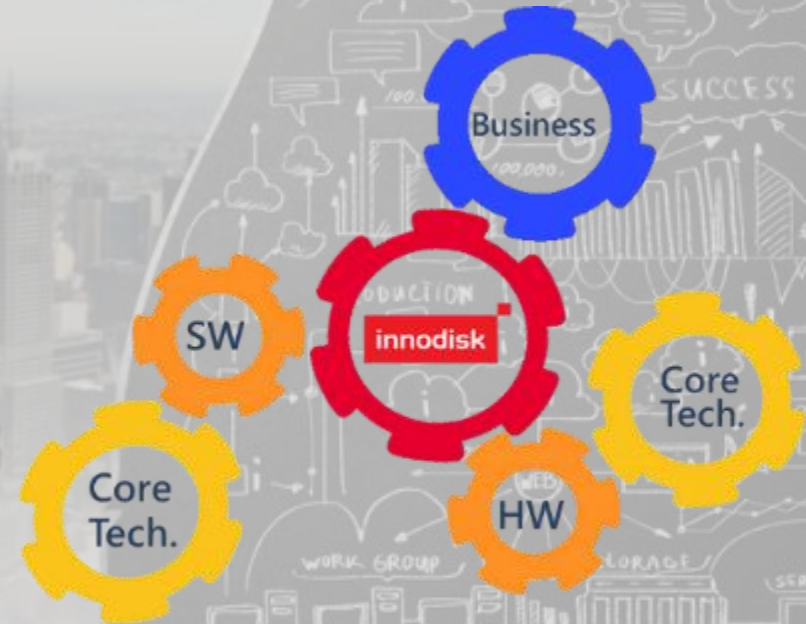
Cloud consolidation / predict the future

FW :

Intelligent learning / unlimited applications

HW :

Hardware customization / making the difference



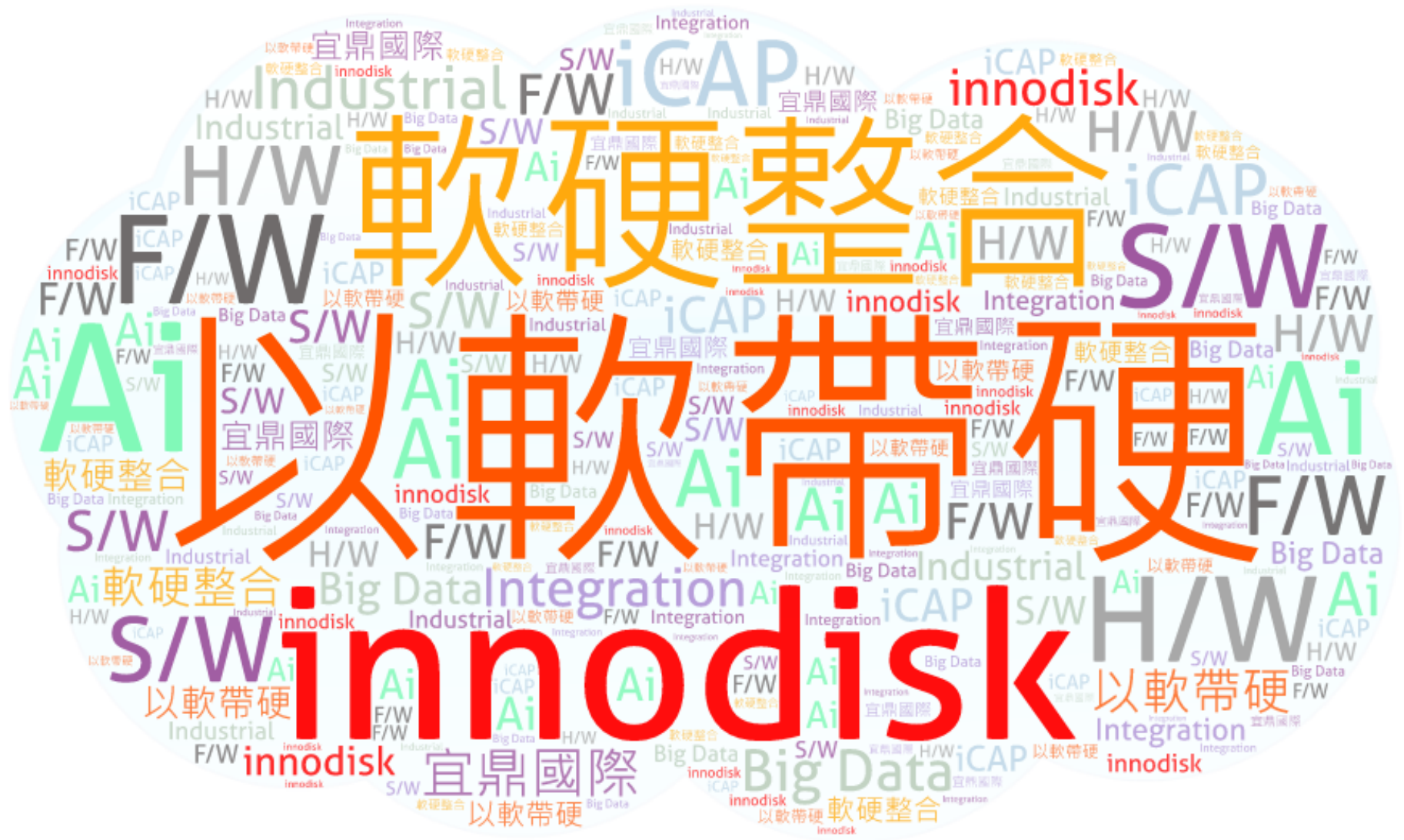
inno 2.0

Absolute
Service



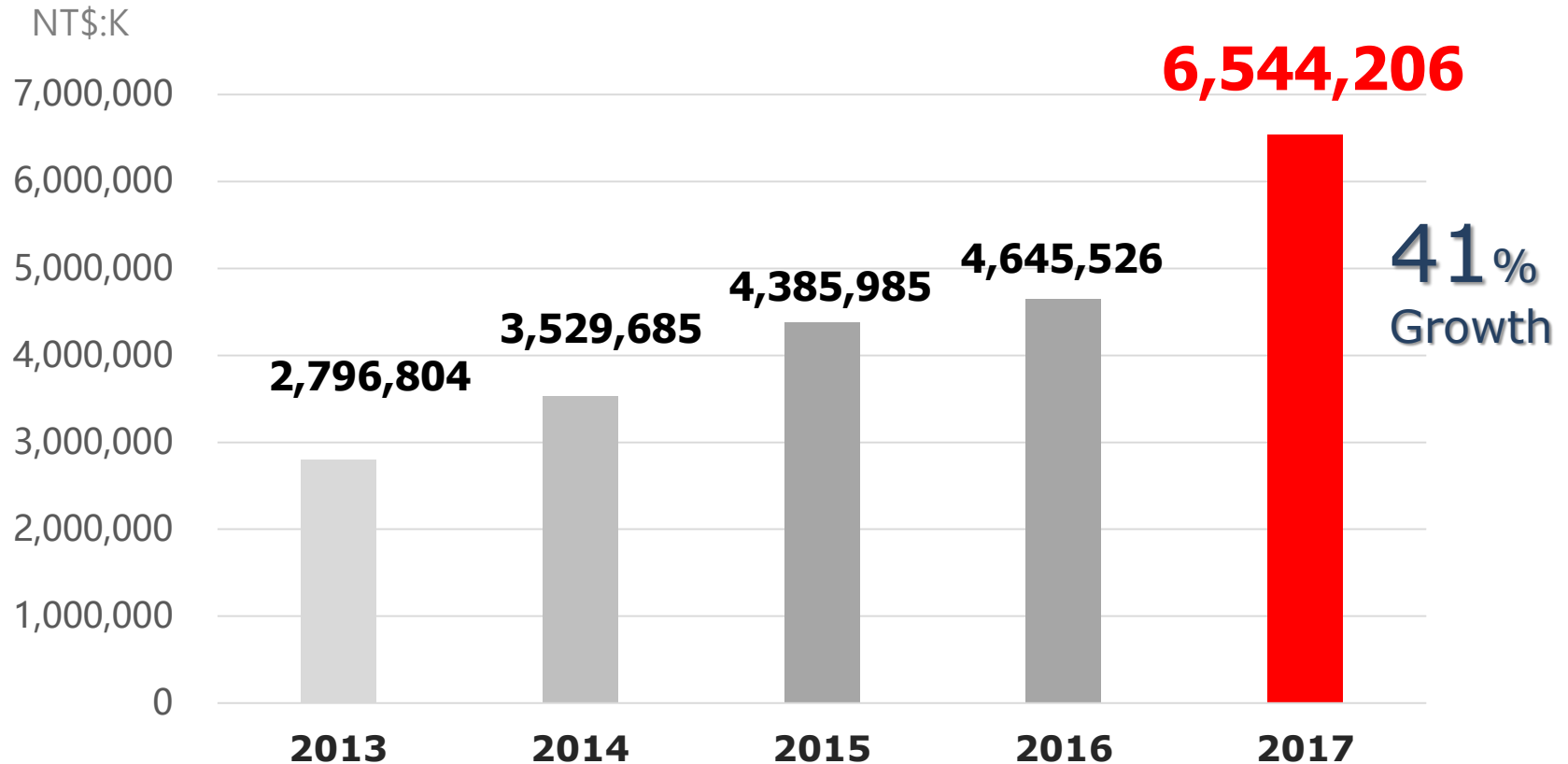
Absolute
Integration



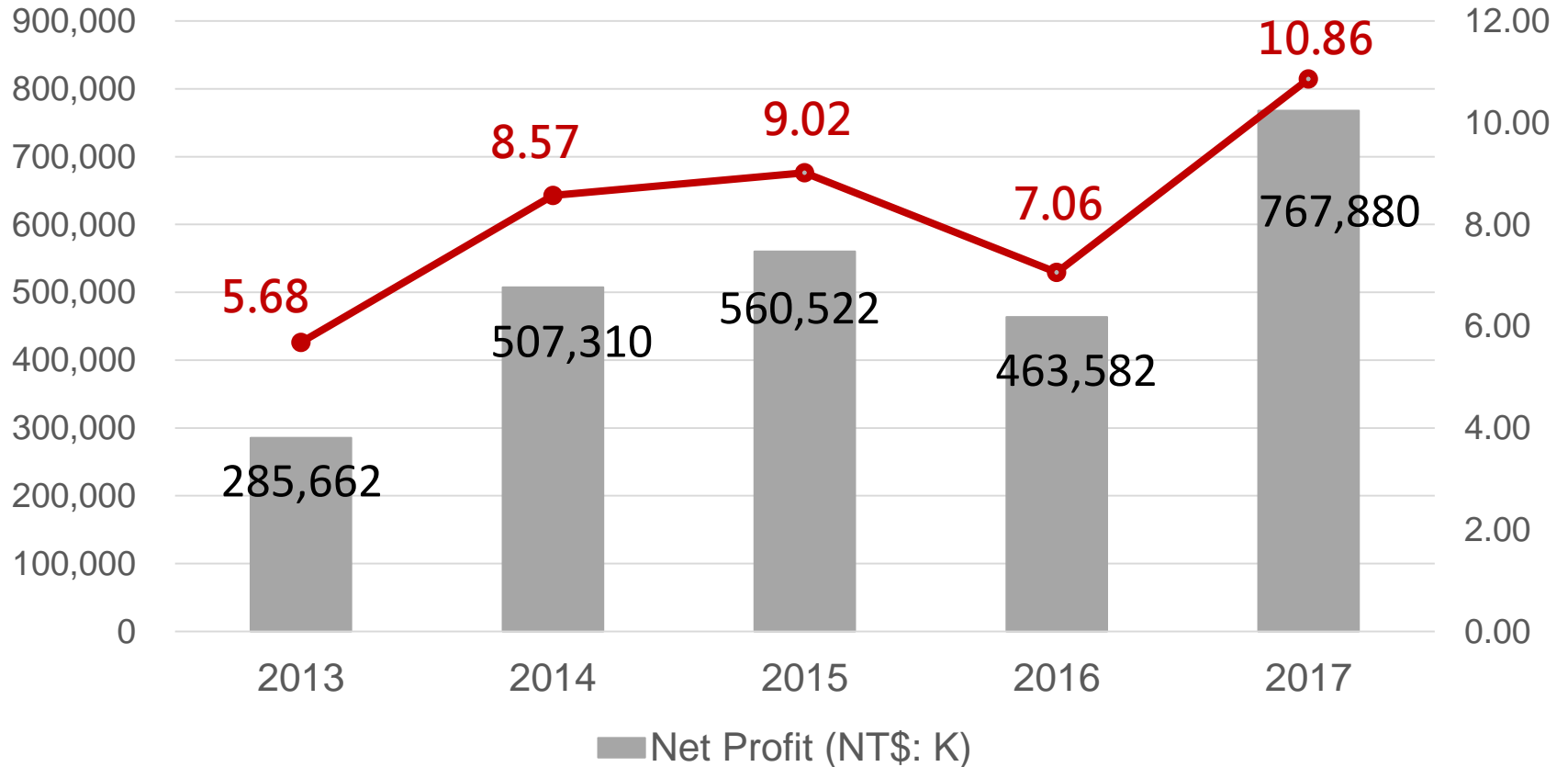


Financial information

Revenues over last 5 years

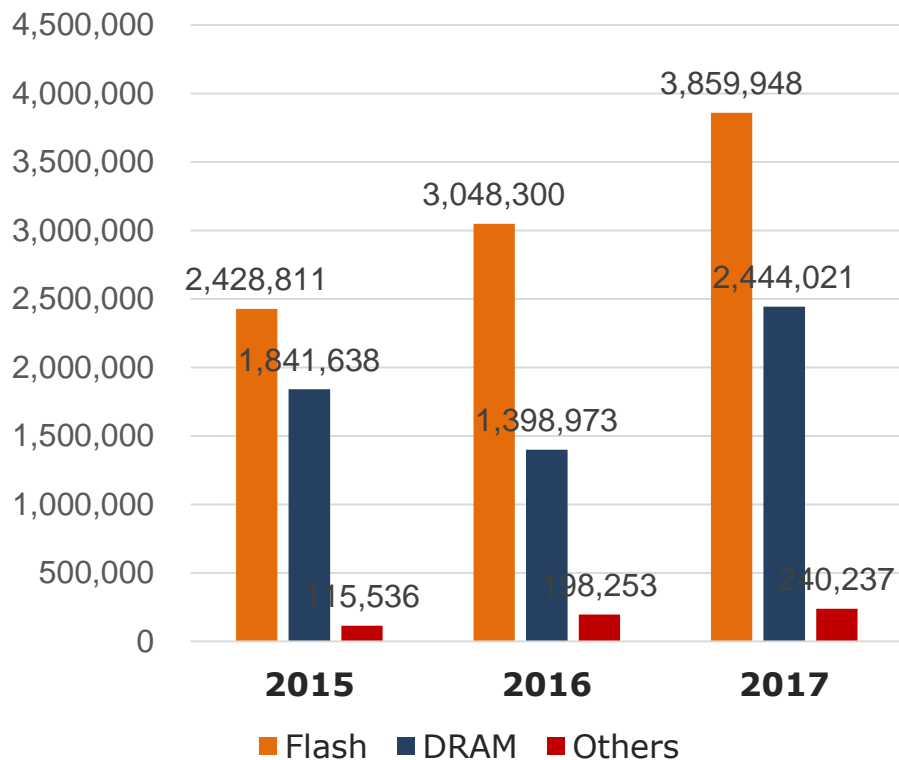


Net profit and EPS over the years

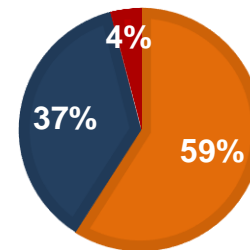


Revenue by product lines

NT\$:K

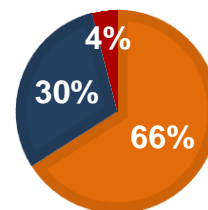


2017



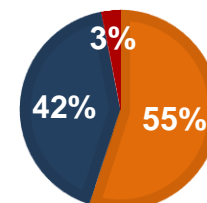
Flash DRAM Others

2016



Flash DRAM Others

2015

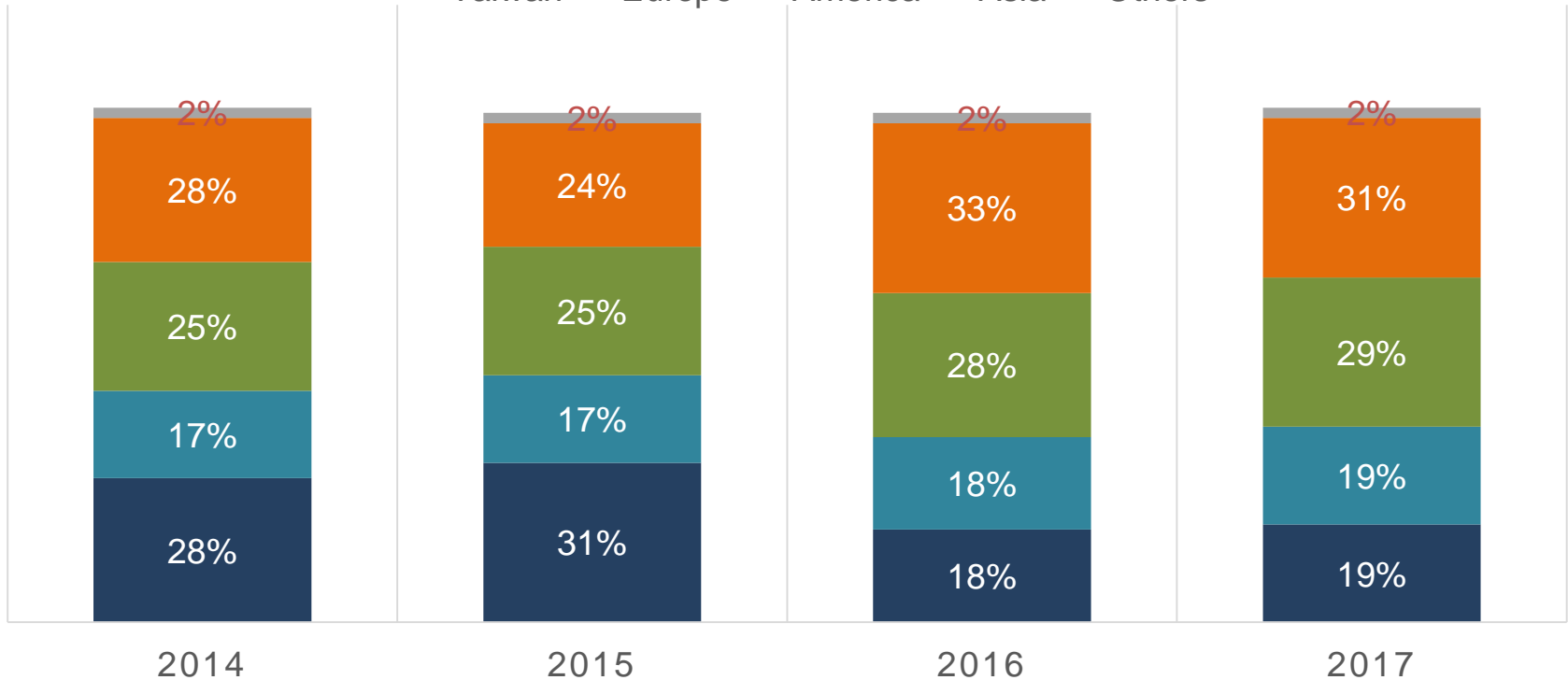


Flash DRAM Others

Revenue by regions

REGION

■ Taiwan ■ Europe ■ America ■ Asia ■ Others



Annual income statement

	2015	2016	2017	
Revenues	4,385,985	4,645,526	6,544,206	40.9%
Cost of good sold	3,177,475	3,381,202	4,770,505	41.1%
Gross profit	1,208,510	1,264,324	1,773,701	40.3%
Operation expenses	572,419	713,676	777,465	8.9%
Operation profits	636,091	550,648	996,236	80.9%
Non-operating income and expenses	29,230	(19,002)	(78,308)	312.1%
Profit before tax	665,321	531,646	917,928	72.7%
Income tax expense	144,637	125,762	187,067	48.7%
Net profits	520,684	405,884	730,861	80.1%
Non-controlling interests	(39,838)	(57,698)	(37,019)	
Net profit attributable to parent company	560,522	463,582	767,880	65.6%
EPS	9.02	7.06	10.86	
Gross margin	27.6%	27.2%	27.1%	
Operating margin	14.5%	11.9%	15.2%	
Net profit rate	11.9%	8.7%	11.2%	

Q & A

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Innodisk Corporation

