Abocom Systems Inc.

兆勁科技股份有限公司

2018法人說明會

2018.07

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Introduction

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科技

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Network Manufacturing

– 主講人：董事長 紀政孝

http://www.abocom.com.tw/strategy.html

本公司原名友旺科技成立於民國84年，以研發銷售PCMCIA介面的乙太網路卡 (Ethernet)及數據卡(Modem)為主要業務，而後先後跨足寬頻網路、無線網路、微型電腦、Android 電視棒與電視盒產品等，並同時接受客戶端ODM與OEM的委任。民國89年12月8日起於台灣證券交易所服份有限公司上市買賣；並自民國107年5月經股東會決議及同年6月經濟部核准更名為兆勁科技股份有限公司。

AboCom Systems Inc. started in 1995 with the foundation of developing and producing ethernet cards with PCMCIA interfaces and modems. It then entered the market of broadband devices, wireless devices, microcomputers, Android Miracasts, set-top boxes, and also sub-contracts. AboCom was listed on TWSE in December 2000.

兆勁
科技

兆勁六大事業組織

兆勁
六大事業組織
6 Major Departments
of Abocom

資安軟體事業
Information Security

先進雷射晶片事業
VCSEL Chip

物聯網應用事業
IoT Application

先進晶圓材料事業
Advanced Wafer

網通製造事業
Communication
Network Manufacturing

記憶體事業
Memory Testing

兆勁
科技

網通產品

目前網通相關為主要營收來源，107/1-11營收為新台幣10.99億元較去年同期新台幣14.22億元衰退比例約為2成，
其中原因主要為MLCC等被動元件價格持續飆漲與缺貨、客戶超額下單更導致交貨期拉長至6個月。本公司針對特定機種及規格持續在現貨市場掃貨但仍未能滿足生產所需，
但訂單仍處滿手階段，故此一部分非實質營收衰退，未來仍有遞延出貨效應產生。

Network Communication Products
Sales of communication network products is currently the major revenue of Abocom. Revenue between January 2018 to November 2018 had a 20% decline compared to the same periodic revenue of the previous year, with the shortage and price surge of devices and excessive orders. Specific models have been chosen to fill the needs but still couldn't reach the demanded quantity, and with the demand full and ongoing, it should not be treated as an actual decline and late shippings will continue with the deferred shipment effect.

3 先進雷射晶片
VCSEL Chip

– 主講人：副總 潘德烈

Apple's Face ID component supplier Finisar acquired for $3.2B

By Malcolm Owen
Friday, November 09, 2018, 04:27 am PT (07:27 am ET)

Finisar, the producer of laser scanners used to power Apple's Face ID system on its iPhones, has been acquired by optical system producer II-VI Incorporated, in a purchase said to be worth approximately $3.2 billion.
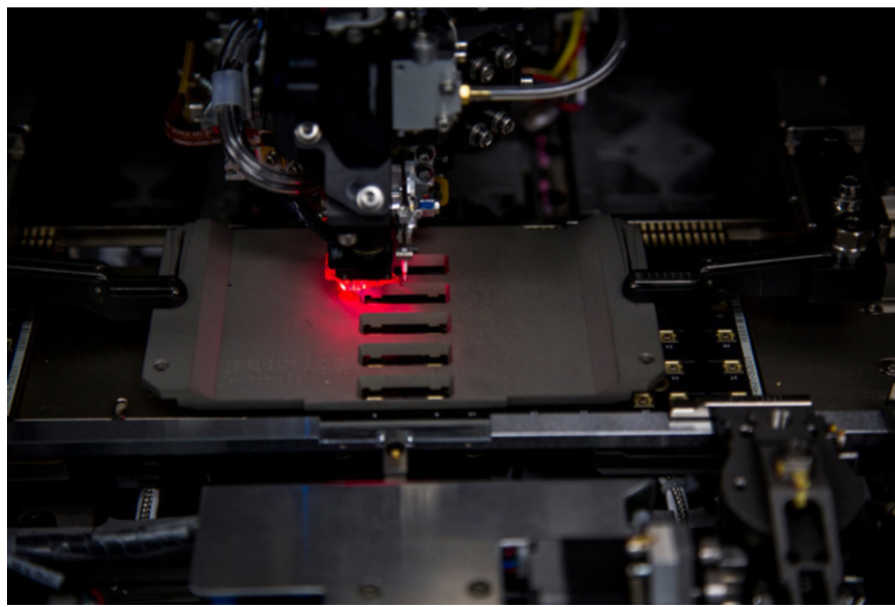
Machinery on a Finisar laser production line

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 Abocom VCSEL Department

Vertical-Cavity Surface-Emitting Laser(VCSEL) is material for chips that serve in Mobile Proximity Sensors, 3D ToF, Active Optical Cables(AOC), mini LEDs, etc. It is often insufficient especially in Optical Communication business due to the supply and demand imbalance of fine chip production, and is constantly out of stock and treated as one of the strategic resources in the world.
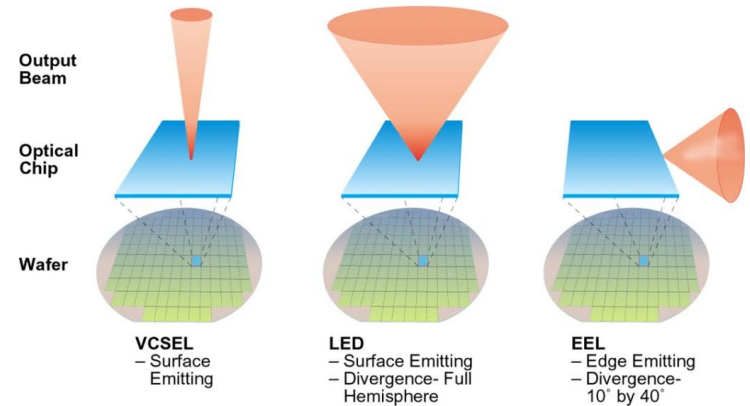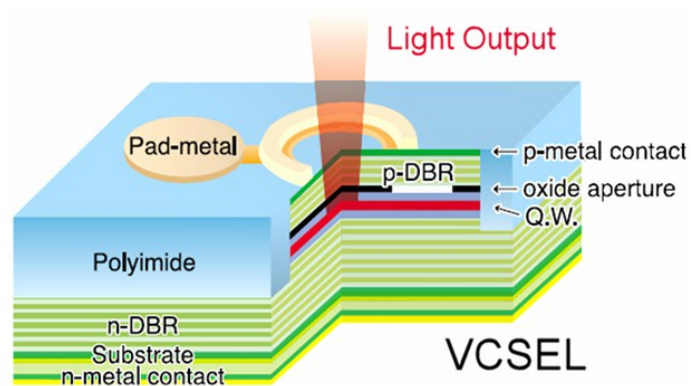
【Sept. 21, 2018, WeChat News】

重磅！VCSEL外延片被英美实施出口管制，国内产业链急需自主化

资本市场青睐，国家扶持，初创企业如雨后春笋，VCSEL市场如鲜花着锦、烈火烹油一般火热。然而，英美对VCSEL外延片的出口管制，无疑是卡住他们发展的一道难以逾越的关口。

集微网报道，"美国、英国的VCSEL外延片对中国施行出口管制，仅仅有小批量研发用，或者20W以下、民用已定义好芯片及切割的产品可以对中国出口。"一位国内3D感测产业链人士对集微网记者透露。这对于正受到资本市场青睐、如雨后春笋般冒出的VCSEL初创公司无疑是一记重击。

2017年，苹果发布基于VCSEL技术的iPhone X，采用三颗不同的VCSEL裸晶用以实现Face ID和近距离感测，驱使2017年的VCSEL市场呈现爆炸式增长，整体营收达到3亿3千万美元。一时间，VCSEL产业链成为当红炸子鸡，而2018年安卓阵营的跟进，更让这一产业呼声达到最高点。

VCSEL - The Eye of Artificial Intelligence

VCSEL Technology

VCSEL chip
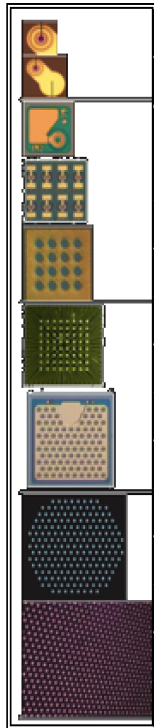
Optical Communication

P-Sensor

Gesture Sensor

3D Sensor

Iris Identification

Face Scanning

3D Camera

AR/VR

Laser Auto Focus

Night Vision

Light Radar

Co-bots

Medical Sensor

Laser Cutting

VCSEL application

Optical Communication

5G Communication

Cloud Information Center

Security

Mobile Payment

IoT

VR/AR

Drones

Auto Driving

Automated Manufacturing

AboCom Abocom VCSEL Department

High Quality VCSEL Chips only comes with fine Crystal Growth Technology, and thus produce fine VCSEL module products.

Abocom Systems is one of the leading brands of module manufacturing in Taiwan. Close collaboration with Company X led us to develop upstream business in designing and manufacturing VCSEL chips based on the module manufacturing foundation we have, from which the Advanced IC Department was founded with a team of professionals.

Global fibre optic communication food chain

Source: Daiwa
Note: * OCM = optical contract manufacturer; ** IDM = integrated device manufacturer, *** MSA = multi-source agreement

Compound-semi substrate	Epiwafer growing	Chip fabrication	Optical subassembly	Module assembly	End-market application
					FTTX
					Datacentre
					MSA***

OCM*

| AXT, Sumitomo, Freiberger, IQE (WaferTech) | LandMark Opto, IQE, IntelliEPI, EpiWorks, VPEC, WinSemi | GCS, 44 Institute, Inari, Emcore, WinSemi, ... | ASE, Amkor, ShunSin, Inari, Venture, eLASER, PCL Tech | Sercomm, SGEC, PCL Tech ... | Telecom: Huawei, ZTE, FiberHome, Alcatel-Lucent, etc |

Semi-IDM: Accelink, TrueLight, LuxNet, MACOM, MELCO, InnoLight, Ezconn

IDM*

Full-IDM: Avago, Sumitomo, Lumentum, Finisar, TriQuint (Qorvo), Oclaro, NeoPhotonics, Source Photonics, II-VI, ams, AAOI, Oplink, BinOptics, Philips Photonics, IPG Photonic

Datacom: public and private datacentres

AboCom Abocom VCSEL Department

According to QSFP-DD MSA predictions，global revenue of AOC will exceed 2 billion USD in 2 years(2020), and will reach 3.5 billion in 2022. With the 5G application trending, a market boom is expected in related fields.

Worldwide AOC Market by MSA, 2014-2022

Legend:
- Other and mixed connectors:
- SAS/Mini-SAS:
- CDFP
- CFP
- CXP
- QSFP
- SFP/SFP+
- CX4

100 GbE   200 GbE   400 GbE

Source: Ovum 2016
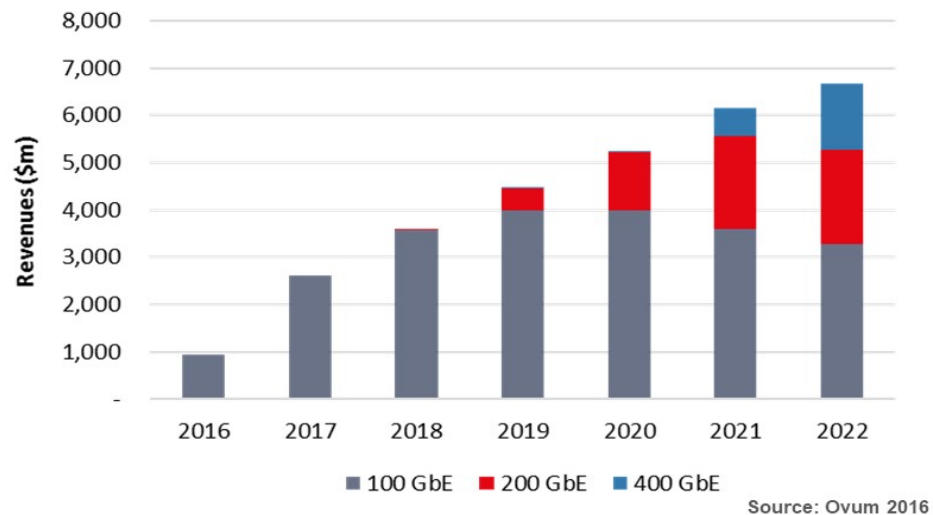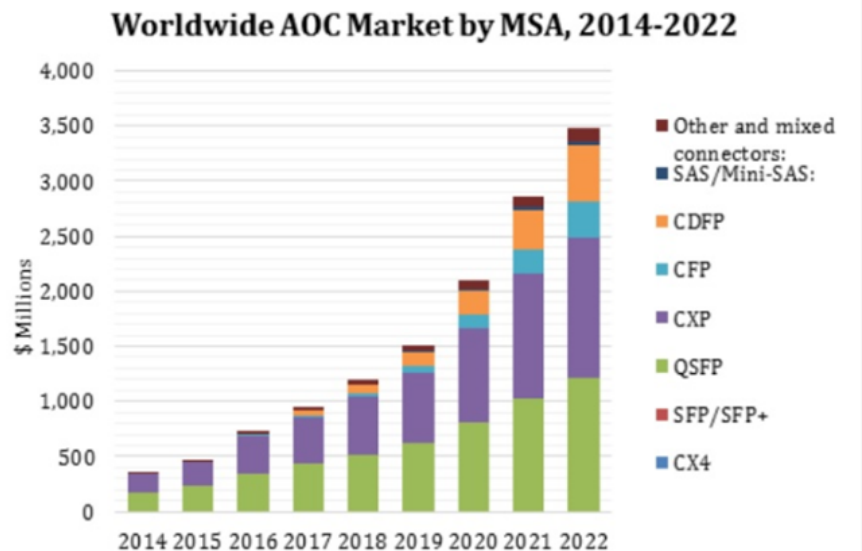
Global Transceiver revenue costs about 3.5 billion USD this year according to OVUM's reports, and will reach 7 billion in 2022.

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Abocom Abocom VCSEL Department

Manufacture Analysis - Target Market Needs

Optical communication companies are now ordering chips from Broadcom or II-VI(Broadcom heat resistant 25G chip costsUSD$10-20/PCS approximately and is insufficient for strategic customers) which are produced and shipped from outside the country, therefore the release time and new products such as100G/200G or 200G/400G are restricted by these suppliers.

With Abocom's heat resistant and high speed VCSEL chips, optical manufacturers can gain access of our customized modules, and thus decrease heavily the time and costs of 100/200G products. It also acts as foundation for 200/400G developing and form alliance of optical transmission, connect upstream and downstream business, and take on the essential position in the global market. We aim to increase the independency of optical communication business in Taiwan, and the strategic level of the global market.

Design Structure

Ethernet Centers

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5G Cell Cites

AboCom Abocom VCSEL Department
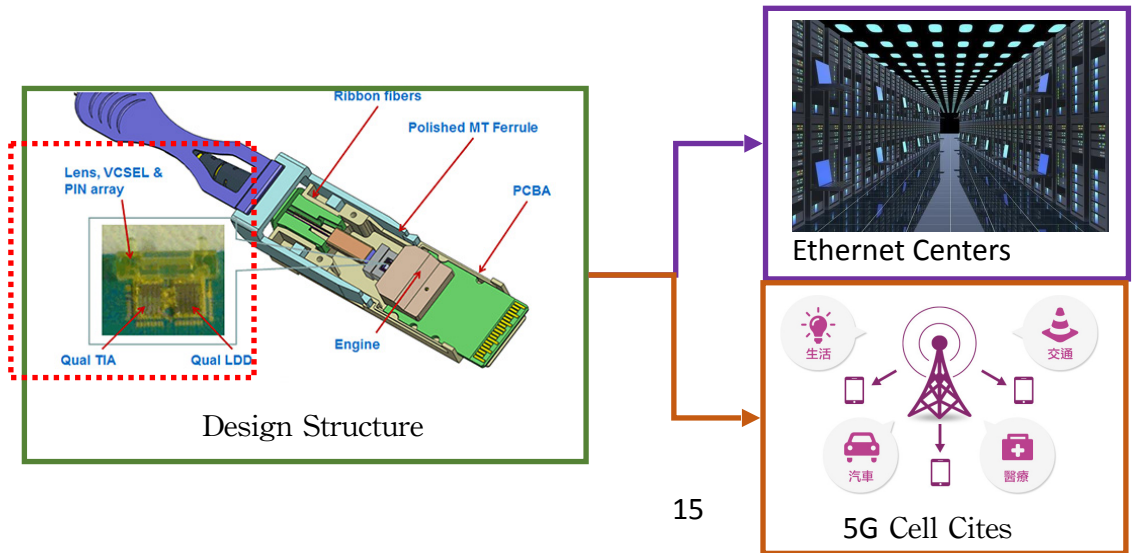
2. Involving in high-end market and increasing the additional value of the product

Apart from optical communication business, VCSEL chips are used in smartphones(Proximity sensor, Face ID, AR) and sensors on cars(LiDAR, 3D Sensing), and also on medical usage. Demands on vehicle electronics, which require larger VCSEL chips, will exceed the need on consumer goods, therefore the major market demand on VCSEL chips is on smart driving.
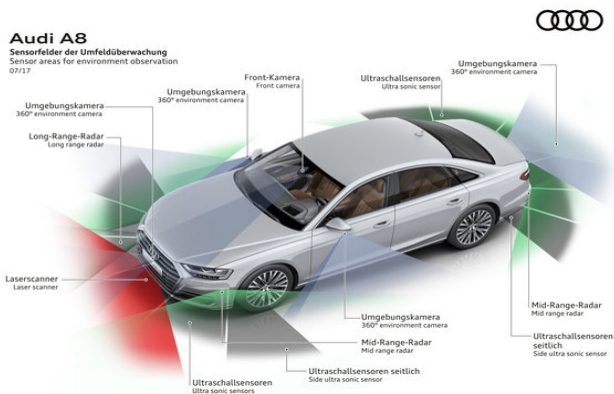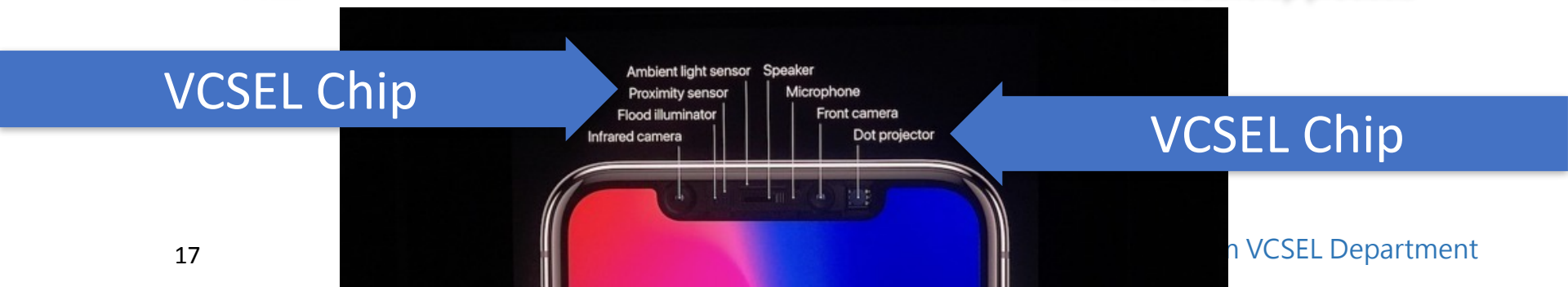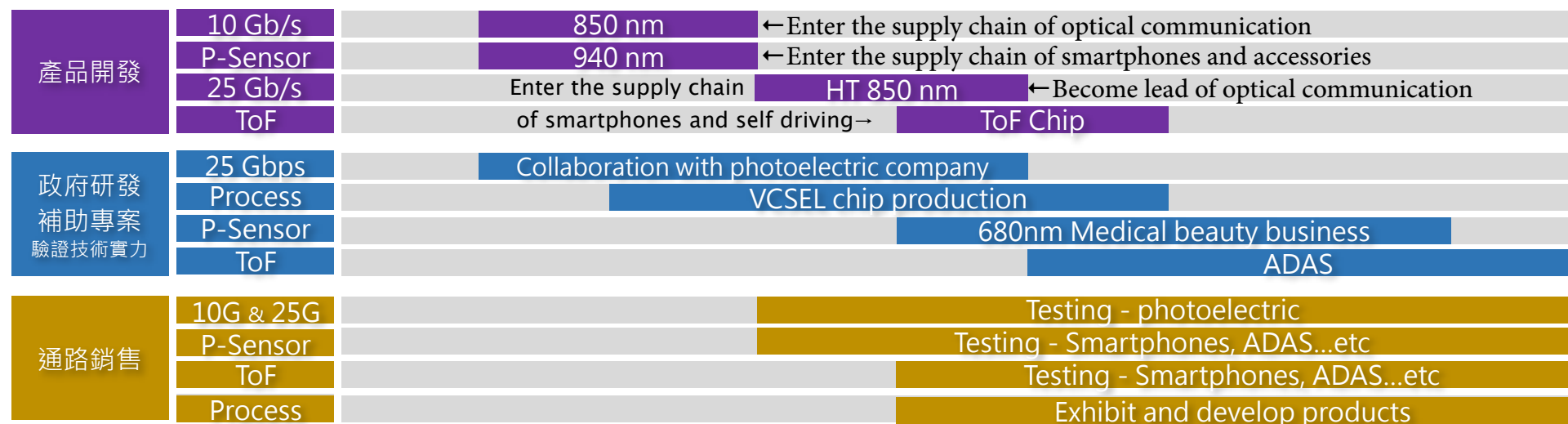

Self-Driving Sensors（AUDI LEVEL3 Self-driven car） Mobile Face Detection and 3D Scanning System

AboCom Abocom VCSEL Department

VCSEL Business Plan - Growing with Motivation

		Q4/2018	Q1/2019	Q2/2019	Q3/2019	Q4/2019	Q1/2020	Q2/2020	Q3/2020
產品開發	10 Gb/s			850 nm		←Enter the supply chain of optical communication			
	P-Sensor			940 nm		←Enter the supply chain of smartphones and accessories			
	25 Gb/s		Enter the supply chain		HT 850 nm		←Become lead of optical communication		
	ToF		of smartphones and self driving→			ToF Chip			
政府研發補助專案驗證技術實力	25 Gbps			Collaboration with photoelectric company					
	Process				VCSEL chip production				
	P-Sensor					680nm Medical beauty business			
	ToF						ADAS		
通路銷售	10G & 25G					Testing - photoelectric			
	P-Sensor					Testing - Smartphones, ADAS…etc			
	ToF					Testing - Smartphones, ADAS…etc			
	Process					Exhibit and develop products			

VCSEL Chip

VCSEL Chip

Ambient light sensor   Speaker
Proximity sensor   Microphone
Flood illuminator   Front camera
Infrared camera   Dot projector

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VCSEL Department

Abocom's Place in the Market

VCSEL Wafer + VCSEL Chip | Module Manufacturers | VCSEL Related Fields

Abocom's VCSEL Chip Processing

AboCom

EPI House
Company X Crystal Growth

Abocom VCSEL Department

Research institute A (Academic)

Research institute B (Industry)

ADAS module

Face ID module

OO Technology

OO Photoelectric

OOMachinery

OOO Technology

Abocom VCSEL Modules

Optical Communication

5G Communication

Cloud Information Center

Security

Mobile Payment

IoT

VR/AR

Drones

Auto Driving

Automated Manufacturing

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AboCom Abocom VCSEL Department

Thank you.

4 資訊安全

Sailpoint 資安軟體

Information Security：Sailpoint

– 主講人 副總 賴肇胤

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現今全球嚴重的資安及個資洩漏事件不斷產生，各地區或各國都已經訂立嚴峻且高罰則的法律來規範．例如歐盟GDPR個資法規，最低罰則為2000萬歐元，而最高是集團年度營業額4%。
英國皇家航空、國泰航空、google、facebook都已被追究罰款，皆動輒數十億台幣。

In response to frequent data breaches throughout the world, there are strict regulations established in each region for data security. For instance, GDPR's lowest fines is 20,000,000 EU, and Royal Airways, Cathay Pacific, google, facebook have been investigated and each fined with billions of TWD.

世界各地訂立的資安或個資法律，已經不是用文字大綱式的說明要符合哪些行為。以**GDPR**而言，很多條文都註明所有的防護相關機制都必須自動化，換言之，必須採用資訊系統自動化治理。

There are actions to be taken according to cyber security or identity security regulations. For example, GDPR has stated that any protection procedure must be automated, which stated that the governing system within the company has to be automated.

兆勁科技

兆勁新技術中心，提供客戶現在市場能夠完全符合各國法規且自動化的
IAM(Identity and Access Management; 身份識別治理)及
DAG(Data Access Governance; 資料存取治理)系統，
從一個組織或公司的全面資訊了解到完全符合法規自動化系統建置服務。

The New Tech Center of Abocom provides customers with comprehensive IAM (Identity and Access Management) and DAG (Data Access Governance) systems that are fully compliant with these regulations and are fully integrated for an organization or company to fit into the policy of automated governance.

2018年8月兆勁取得連續五年全球首席的IAM/DAG治理自動化工具
SailPoint公司的亞洲區域含日本的代理，
運用來在客戶系統建置時最完美的自動化。

Abocom has the dealership of Sailpoint, the best IAM/DAG automated governing tool,
of Asia Pacific areas and Japan in 2018 for the next 5 years,
applying the perfect automation with the customers' system construction.

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SailPoint與全球前五大顧問公司策略聯盟，
以確保其自動化工具能夠完全符合所有的資安法律：

EY：安永聯合會計師事務所
KPMG：安侯建業聯合會計師事務所
Deloitte：勤業眾信聯合會計師事務所
PWC：資誠聯合會計師事務所
Accenture：埃森哲顧問公司

兆勁也積極與這五家顧問公司取得合作，
以提供給客戶最好的法律諮詢及最全面資訊自動化服務。

SailPoint has a full strategic alliance with the top five global consulting firms to ensure that their automation tools are fully compliant with all of the capital security laws:
Ernst & Young, KPMG, Deloitte Touche Tohmatsu, Price Waterhouse Coopers, Accenture Consultants, and Andersen Consulting.

Abocom is also actively cooperative with these five consulting companies to provide customers with the best legal advice and the most comprehensive information automation services.

兆勁
科技

我們的主要客戶為交通、金融、中大型企業及政府機關…等，營收依據客戶員工數量決定金額。
於2018年9月取得台灣最大航空公司全面採用，現已有5～8家客戶已經完成POC，到達採購流程，尚有40餘家客戶已經在協調客戶需求及資訊狀況了解．
公司董事會已經通過在日本、韓國及越南成立子公司執行經銷業務推展，於2019年同步推展，目標可以完成三個國家的經銷網路。

Our major customers are government departments and middle and large companies of transportation, finance, etc.. The greatest airlines in Taiwan has had the system installed, and there are 5-8 companies that have finished POC and continued with the procurement process. There are 40 more companies interested and negotiating.
We have branches in Japan, Korea, and Vietnam to make more of the market, and will develop simultaneously in 2019. The goal is to complete the distribution network of the three countries.

兆勁
科技

全球資安/個資法律已經有上百個，平均每15分鐘就會有一個新的規定產出，兆勁及**SailPoint**會隨變化將所提供的服務及軟體更新到完全符合的程度。

Sailpoint軟體銷售提供第一年保固，
第二年起每年維護保固（含軟體更新）約銷售價格**25%**上下。

There are hundreds of policies globally that involves network security, and a new policy becomes effective every 15 minutes. Abocom and SailPoint updates the systems and software provided to our customers with every change of the policies. Sailpoint software has a 1 year warranty, and the annual maintenance fee (including software updates) is about 25% of the sales price per year from the second year.

全球在未來對資安的條件及要求只增不減，
本公司的這項服務亦隨時代需求隨時提供最完整服務，為一永續經營的產業。

Through the development of technology and internet, there will only be more restrictions and conditions on information security. Our solution will provide the perfect service at any time on demand, making it a sustainable business.

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5 活動交流 Q&A

THANK YOU.