



SIWARD GROUP

# 希華法人說明會 *Aug. 18<sup>th</sup> 2020*

## SIWARD Company Presentation



PATIENCE CONFIDENCE CONCENTRIC

議程 15:20~16:20	主題	主講人
	開場引言	總經理 曾榮孟
	財務報告	發言人 游淑貞
	產品銷售	發言人 游淑貞
	市場應用與發展	FAE經理 郭聰正
	新發展-IVD元件	IVD 許純淵博士
	總結 Q&A	總經理 曾榮孟

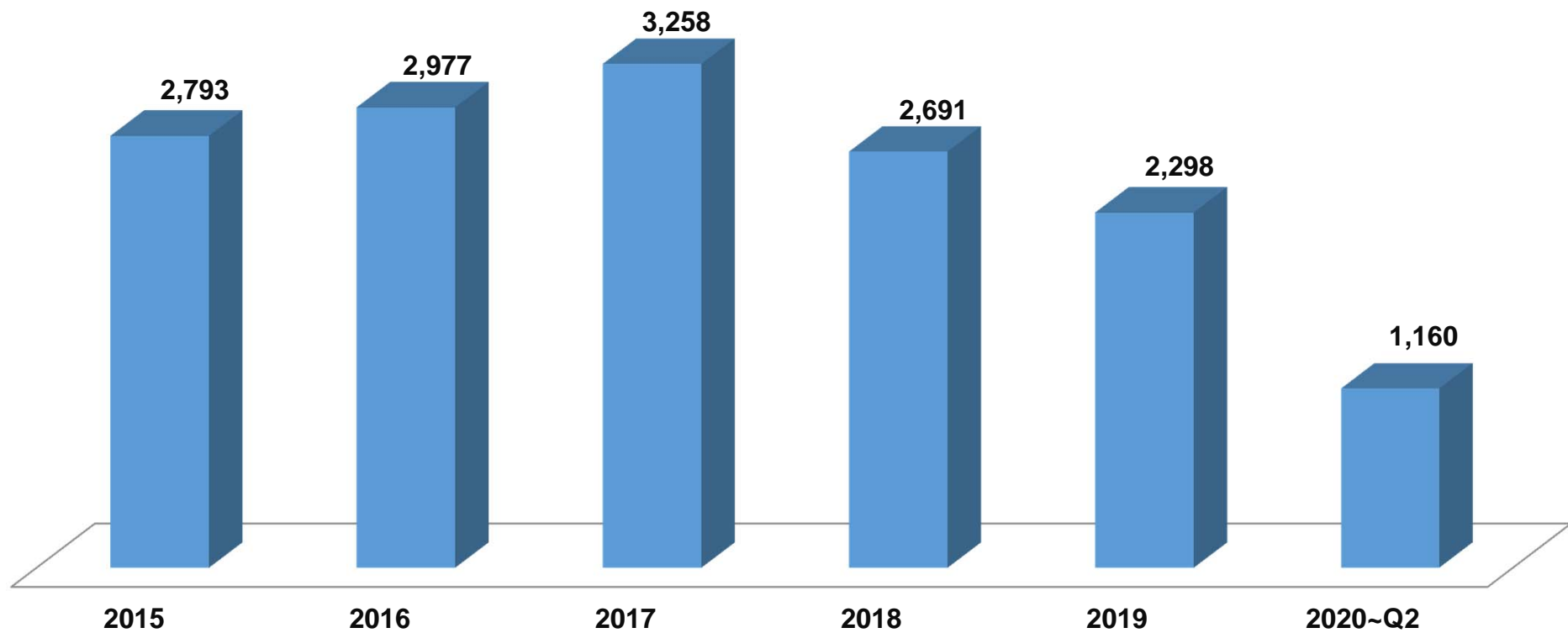
- **財務報告**

財務績效、財務指標、股利政策

# 財務績效-營業收入

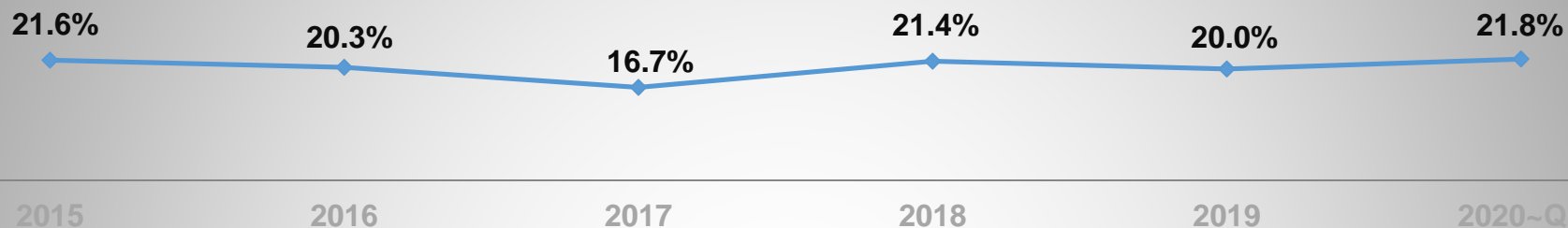
營業收入

單位：新台幣百萬元



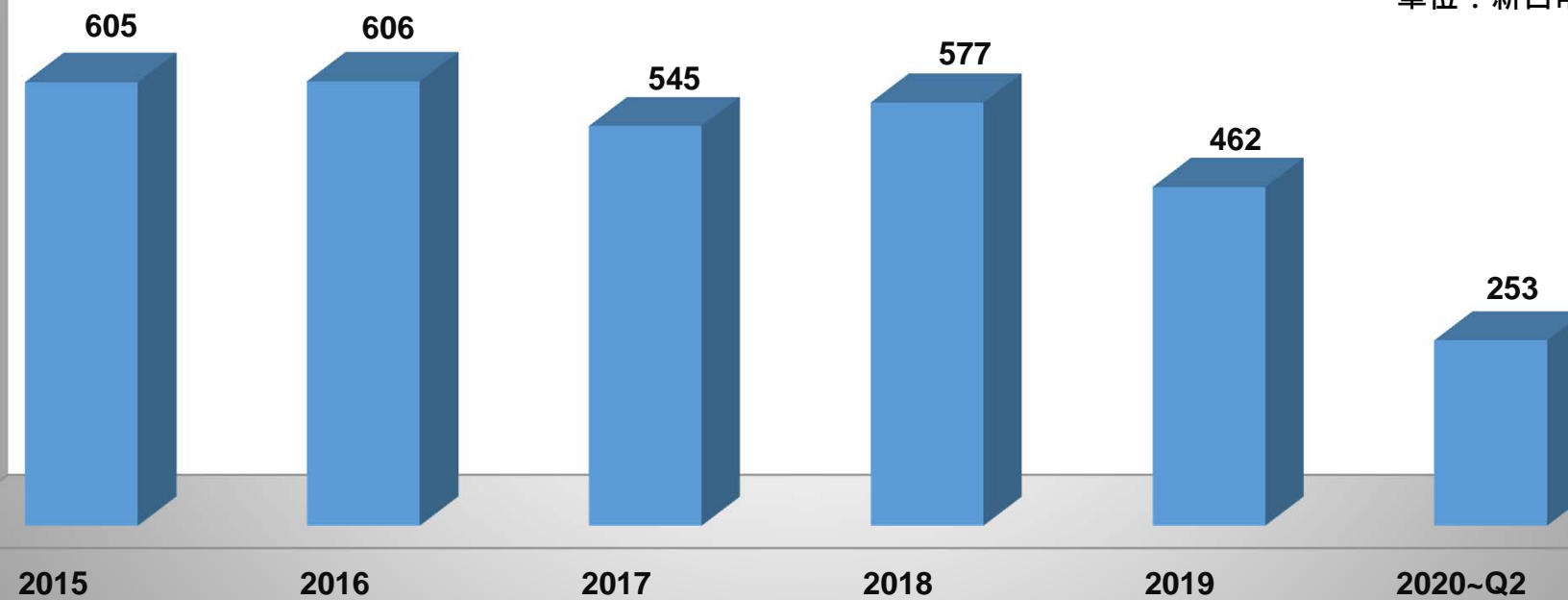
# 財務績效-營業毛利

毛利率



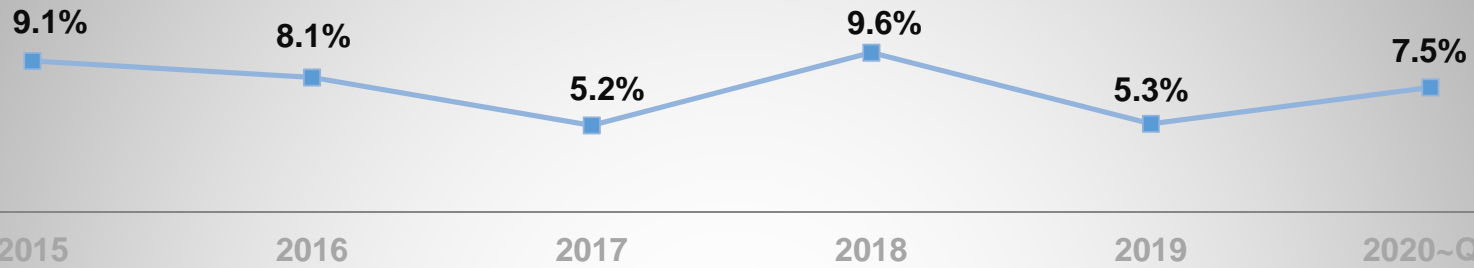
營業毛利

單位：新台幣百萬元

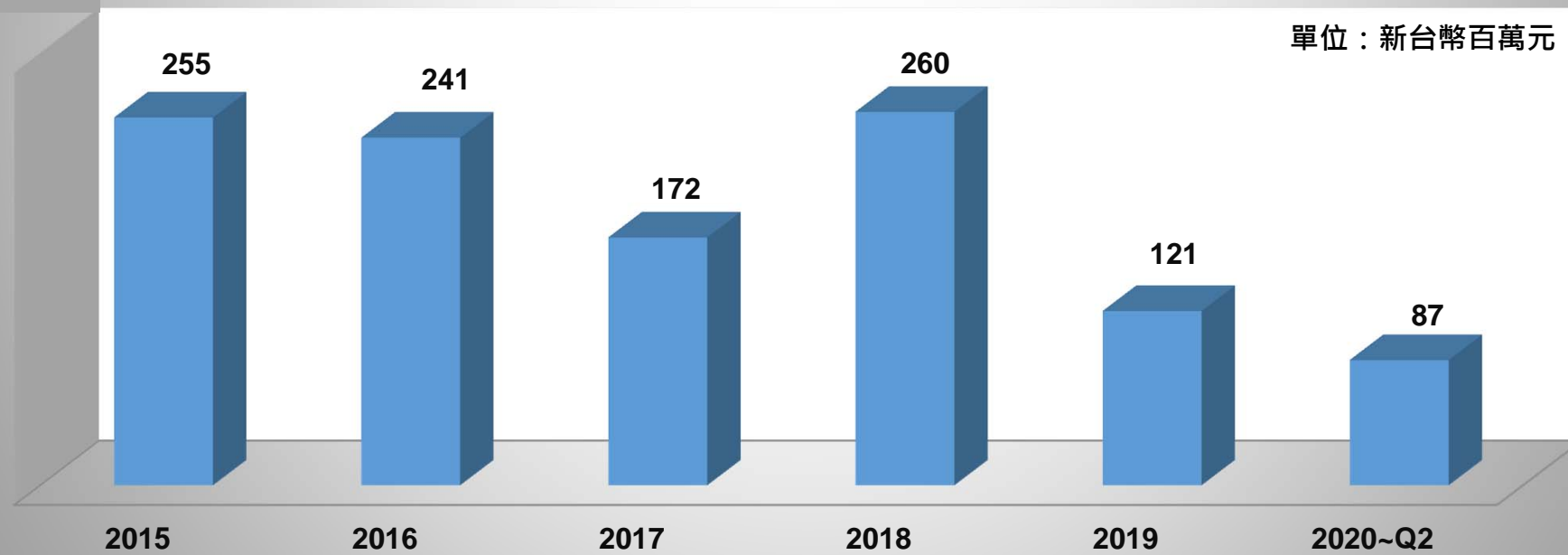


# 財務績效-稅後淨利

淨利率



稅後淨利



# 財務指標1

單位:新台幣仟元	H1 2020	H1 2019	成長率
營業收入	1,160,029	1,105,563	4.9%
營業毛利	253,522	223,655	13.4%
營業淨利	97,550	62,492	56.1%
稅前淨利	109,751	92,695	18.4%
稅後淨利	87,717	74,429	17.9%
毛利率	21.9%	20.2%	8.0%
營業利率	8.4%	5.7%	48.8%
淨利率	7.6%	6.7%	12.3%
權益報酬率	3.0%	2.5%	21.8%
每股盈餘	0.55	0.47	17.0%

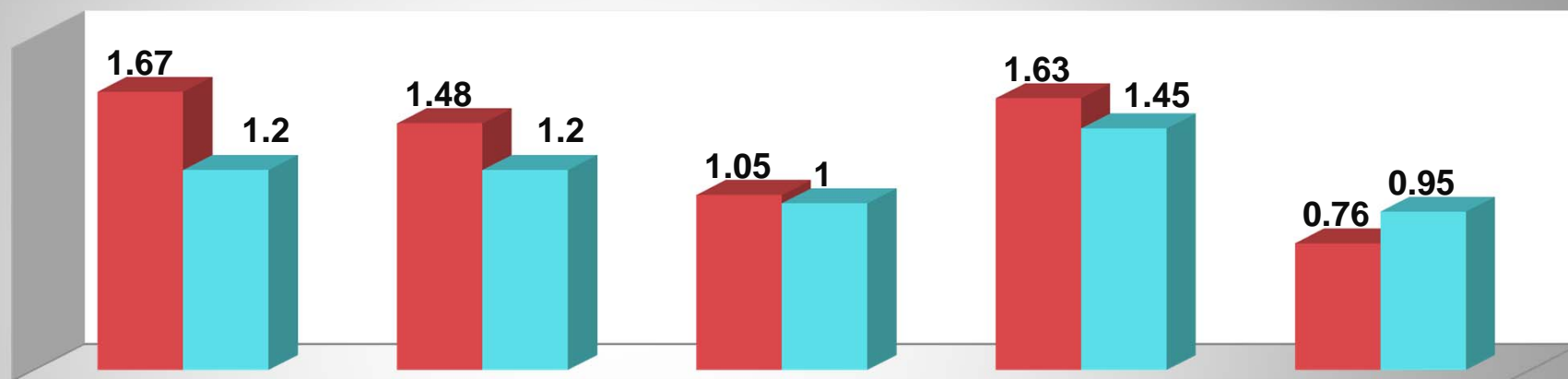
## 財務指標2

單位:新台幣仟元	H1 2020	H1 2019
流動資產	1,788,753	2,006,285
資產總額	4,064,231	4,148,906
流動負債	714,433	634,992
負債總額	1,212,341	1,236,414
權益	2,851,890	2,912,492
負債比率	30%	30%
流動比率	250%	316%
速動比率	201%	226%
每股淨值	17.84	18.22



# 股利政策

- 每股盈餘
- 每股股利



單位:元	2015	2016	2017	2018	2019
每股盈餘	1.67	1.48	1.05	1.63	0.76
每股股利	1.2	1.2	1	1.45	0.95
當年度平均收盤價	19.85	18.8	20.9	19.59	20.06
股息發放率(%)	71.86	81.08	95.24	88.96	125
殖利率(%)	6.05	6.38	4.78	7.40	4.74

- **產品銷售**  
…石英元件

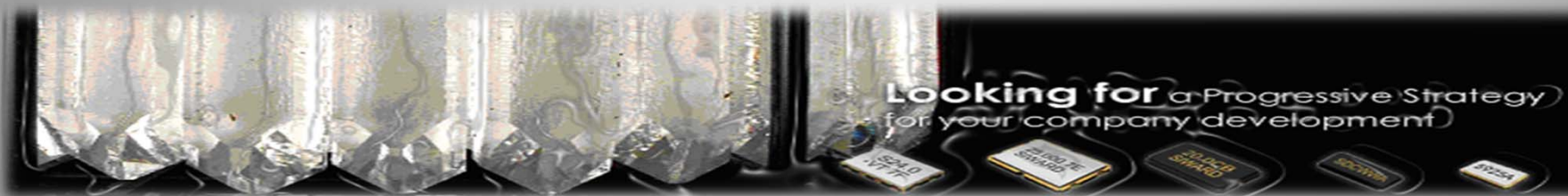
# Who We Are

Innovative Timing solutions for things that connect the world



Listed: TW  
700+ employees worldwide  
60+ R&D engineers  
4 manufacturing sites  
7 sales & marketing offices

# 主要產品



Synthetic Quartz

Crystal 石英晶振

Oscillator 振盪器

IVD 體外檢測



Metal Can

Glass Weld

Crystal Osc

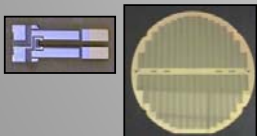
Voltage-controlled oscillator (VCXO)



分子吸附超效儀

Tuning Fork wafer

3"~4" MEMS Wafer



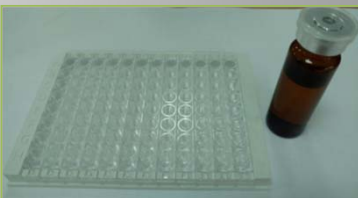
Ceramic seam

Tuning Fork

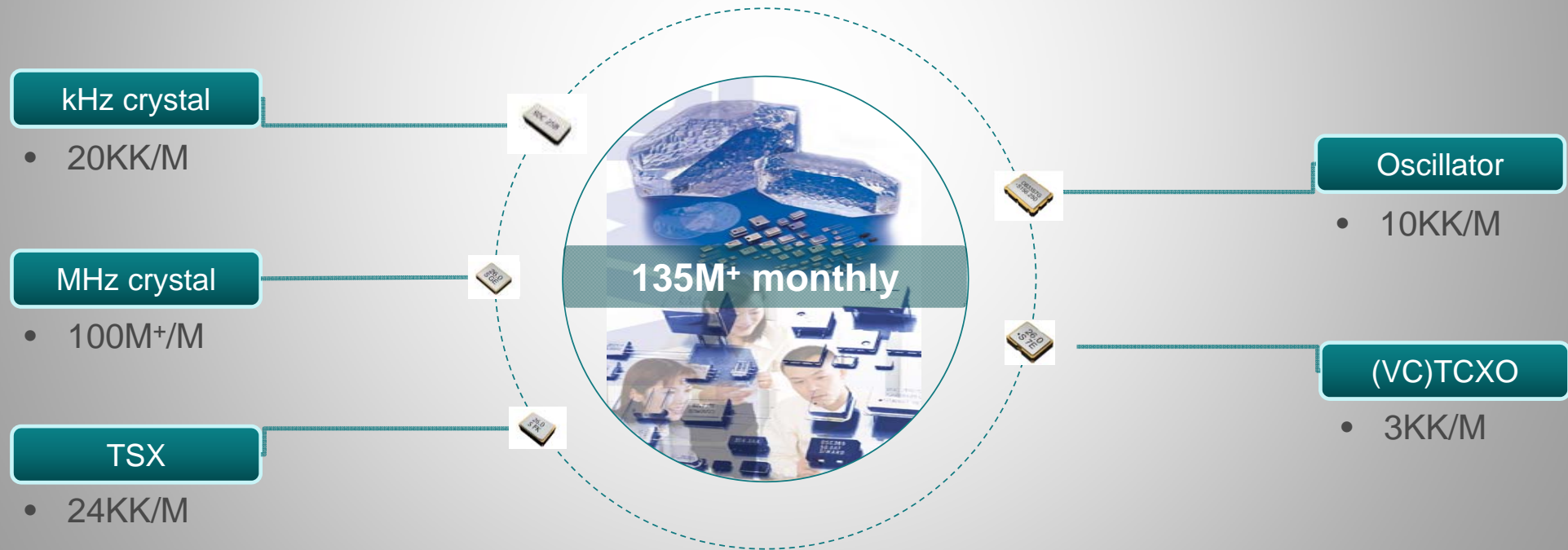
TCXO

(VC)TCXO

高靈敏度免疫訊號檢測套組



# 生產基地



# 生產基地

## HQ, Taichung Taiwan



製造產品:

- RD Center
- Manufacture
- Sales Office

● Crystal



● Tuning Fork Xtal



● OSC



● (VC)TCXO

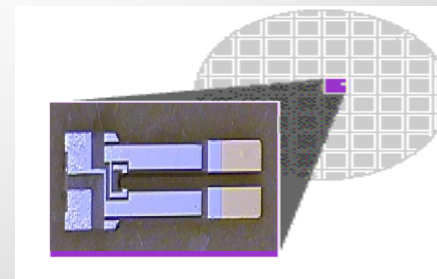


## Zhunan Taiwan

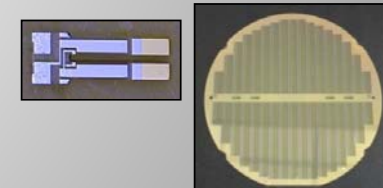


製造產品:

● MEMS wafer



3"~4" MEMS Wafer



# 生產基地

## Tainan Taiwan



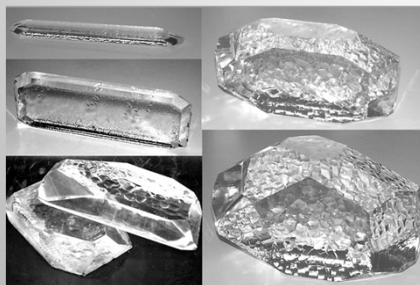
製造產品:



- Tuning Fork Xtal



- Synthetic Quartz Bar



## Suizhou (Taiward) China



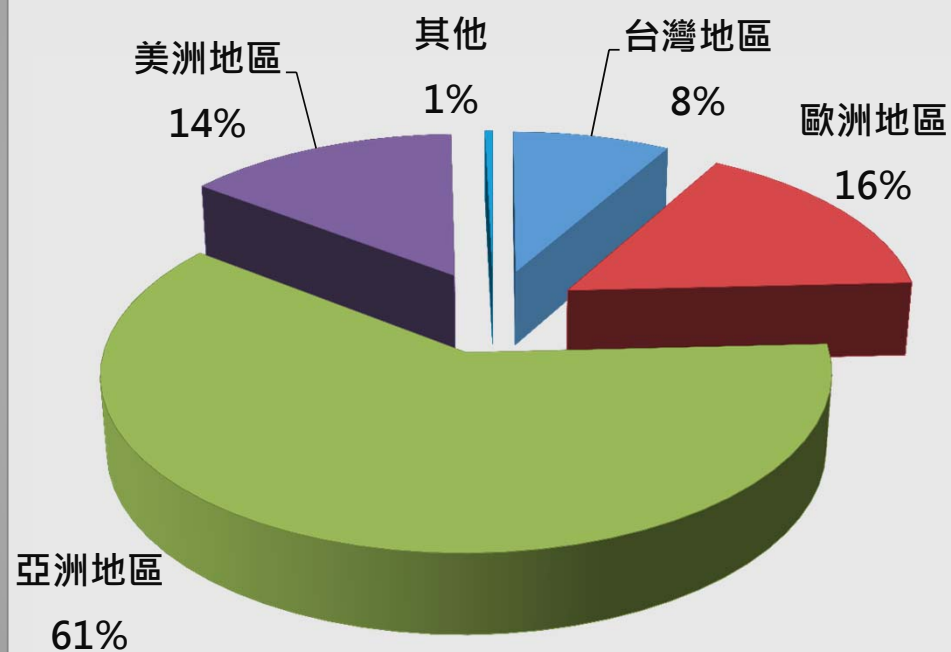
製造產品:

- Crystal

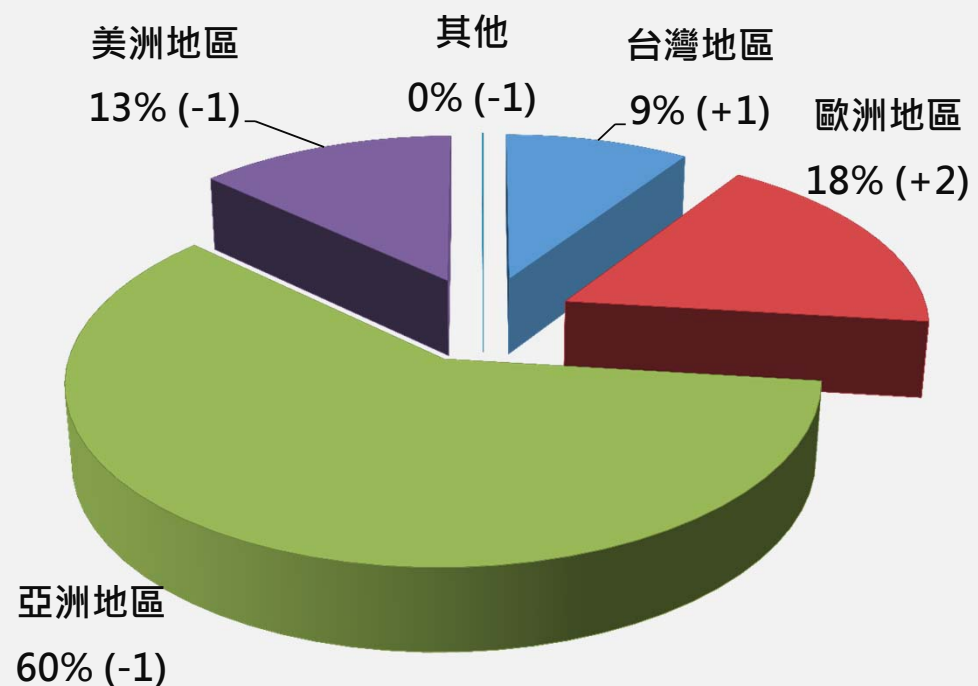


# 地區別銷售額比例

## 2019H1地區別銷售額比例



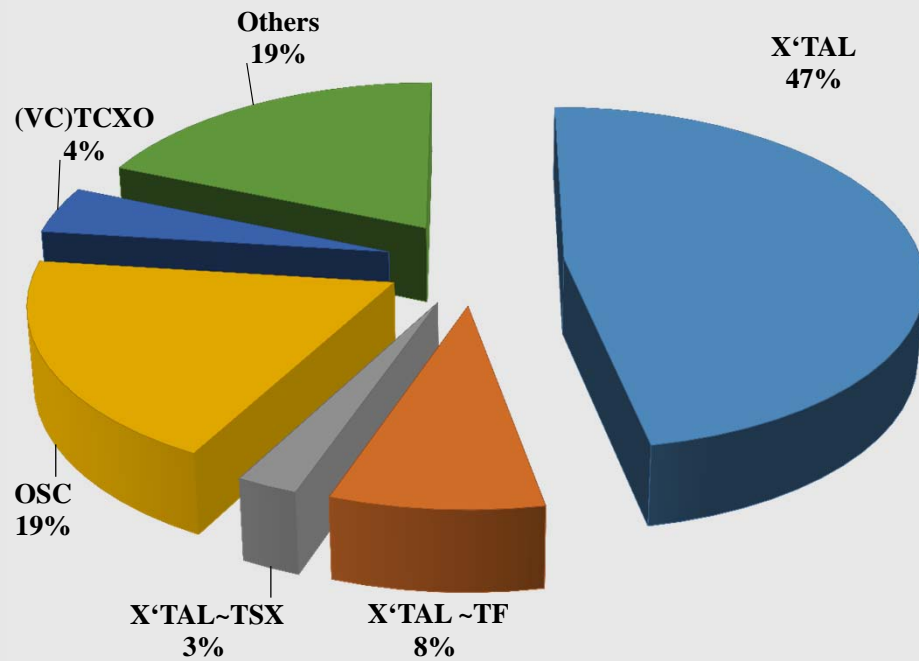
## 2020H1地區別銷售額比例



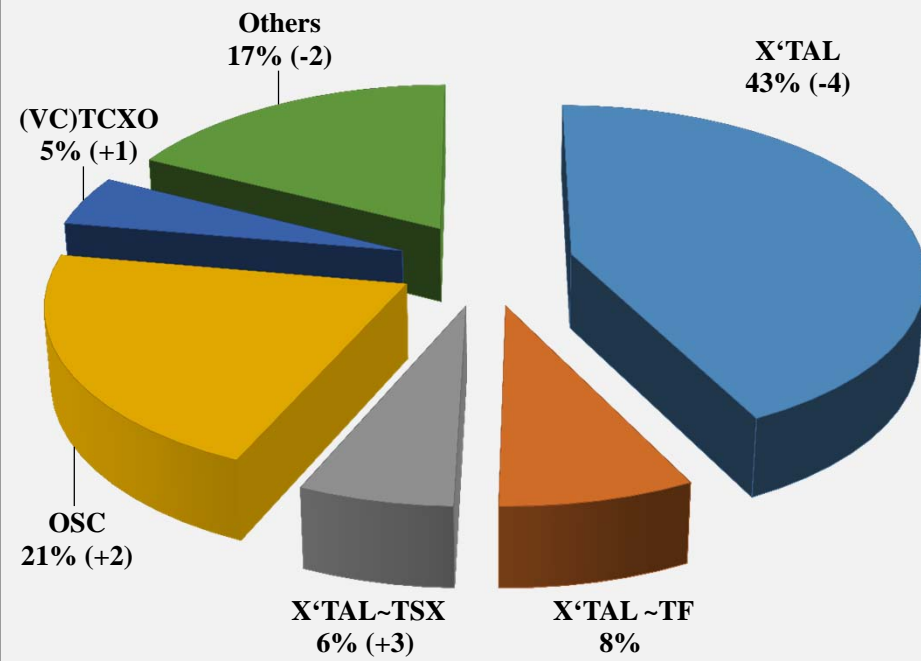


# 產品別銷售額比例

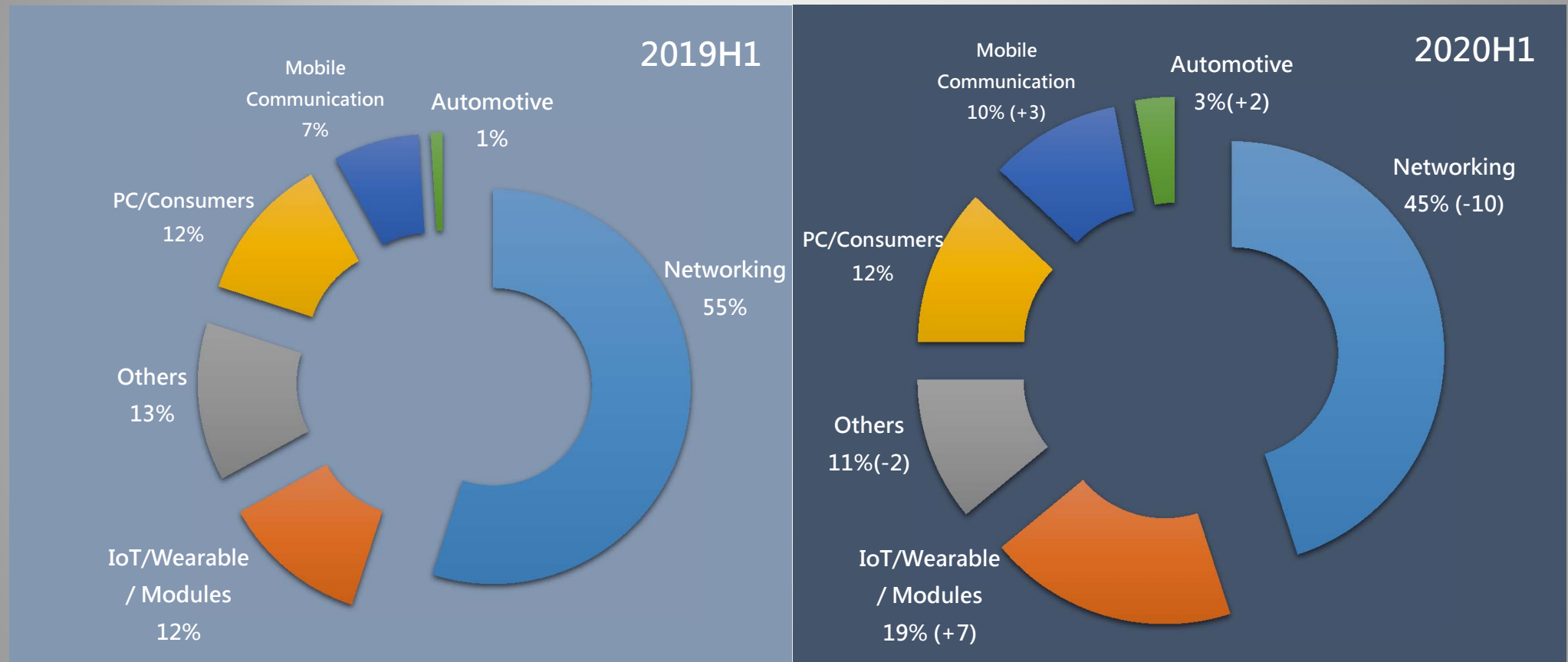
## 2019H1 產品別銷售額比例



## 2020H1 產品別銷售額比例



# 客戶產業別比例



- 市場應用與發展

# 5G : A New Era of Communications

- Capacity Enhancement
- Massive Connectivity
- Ultra-high reliability & Low Latency

Sub-GHz  
mm Wave

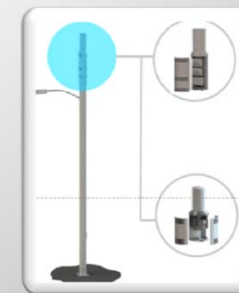


Smart Phone



IoT

V2X



Small Cell

# Communication Systems



**5G/4G LTE**

**Small Cell / CPE**

**GNSS**

**Wearable Device**

**LPWAN**

Crystal

1.0x0.8x0.30 mm

Thermistor

1.6x1.2x0.65 mm

TCXO/VCTCXO

1.6x1.2x0.55 mm

High stability  $\pm 0.1$  ppm

Oscillator

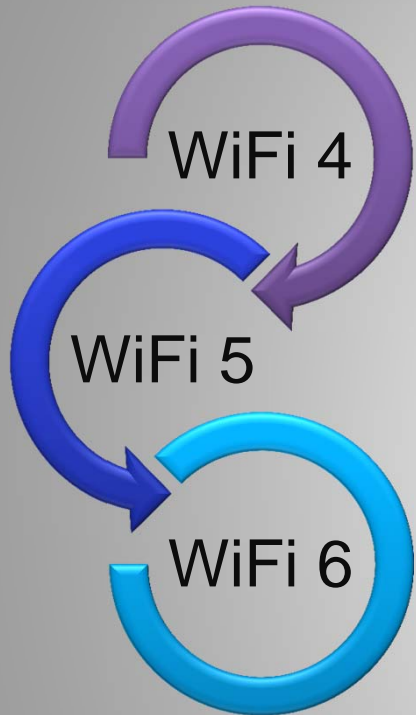
2.5x2.0x0.75 mm

Phase Noise  $\leq -90$ dbc/Hz@10Hz

# Communication Systems



# Communications WiFi



**WiFi 4**  
2.4GHz or 5GHz  
Speed 288Mbit/s on 20 MHz  
Speed 600Mbit/s on 40MHz



**WiFi 5**  
5GHz  
Speed 3.47Mbit/s on 160MHz

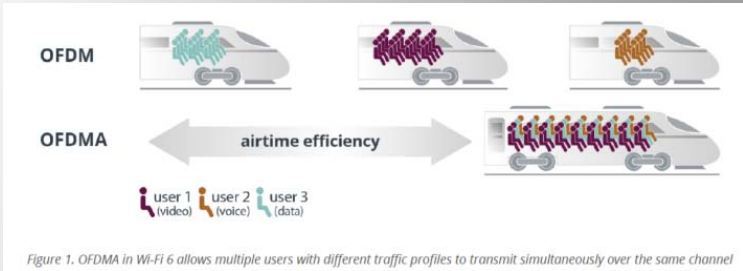


**WiFi 6**  
2.4GHz or 5GHz  
Target Wake Time (TWT)  
OFDMA



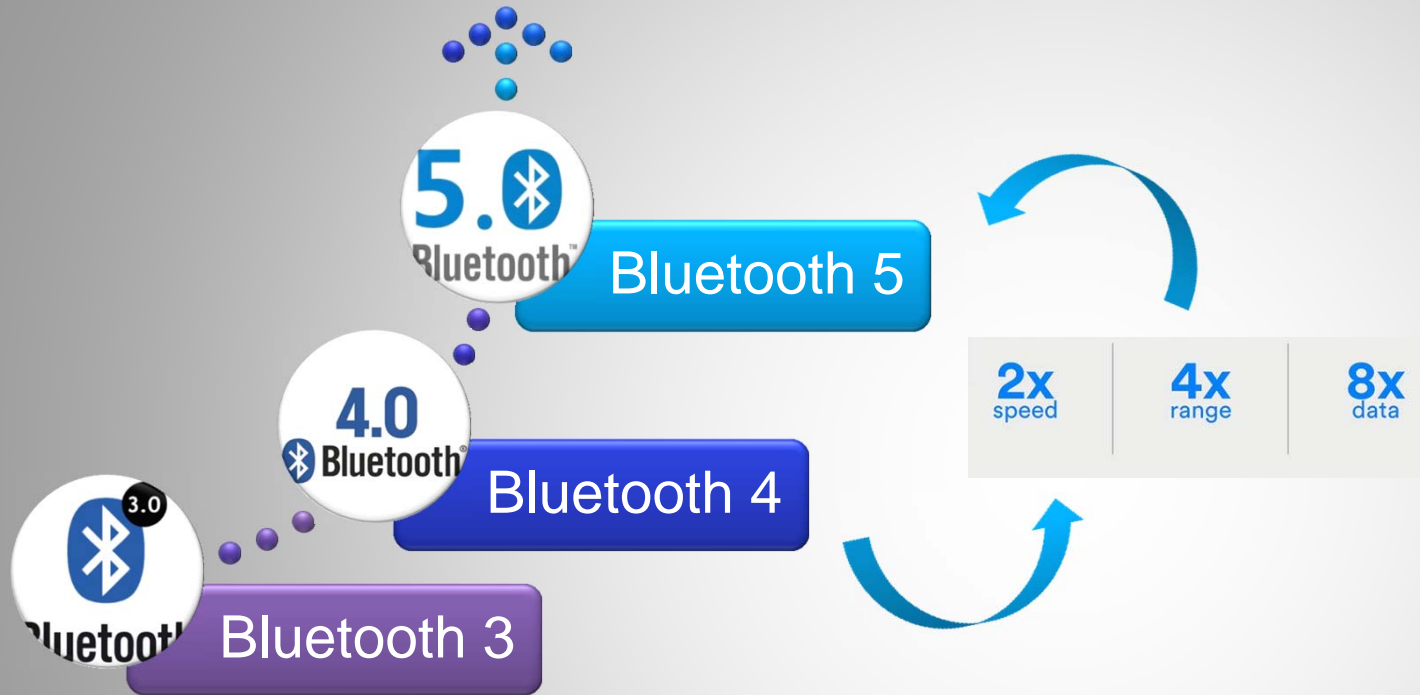
**Crystal**  
1.0x0.8x0.30 mm

**Oscillator**  
2.5x2.0x0.75 mm  
Phase Noise  $\leq -90\text{dbc/Hz}@10\text{Hz}$



# Communication Systems

# Communications Bluetooth



## Crystal

1.0x0.8x0.30 mm

## Oscillator

2.5x2.0x0.75 mm

Phase Noise  $\leq -90\text{dbc/Hz}@10\text{Hz}$

# Communication Systems

# Smart Home



Smart TV

Smart Appliances

Streaming Devices

Smart Meters

Smart Thermostats... etc.

Crystal

1.0x0.8x0.30 mm

Thermistor

1.6x1.2x0.65 mm

Tuning Fork RTC

3.2x1.5x0.80 mm

High stability  $\pm 5\text{ppm}$

Oscillator

2.5x2.0x0.75 mm

Phase Noise  $\leq -90\text{dbc/Hz @ }10\text{Hz}$

Smart Home;  
Smart Control

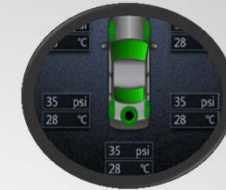


# Automotive (IATF16949)



Infotainment,  
Navigation

Anti-glare Rearview  
Mirror



TPMS



Keyless



Radar

Crystal (AEC Q200)

1.6x1.2x0.50 mm

Tuning Fork (AEC Q200)

2.0x1.2x0.60 mm

TCXO (AEC Q100)

Temperature Range -40~+105°C

High stability  $\pm 0.5$ ppm

Oscillator (AEC Q200)

2.5x2.0x0.75 mm

Phase Noise  $\leq -90$ dbc/Hz@10Hz

Adaptive Cruise  
Control

Tire Pressure Monitoring  
System

Cluster

Blind Spot Detection

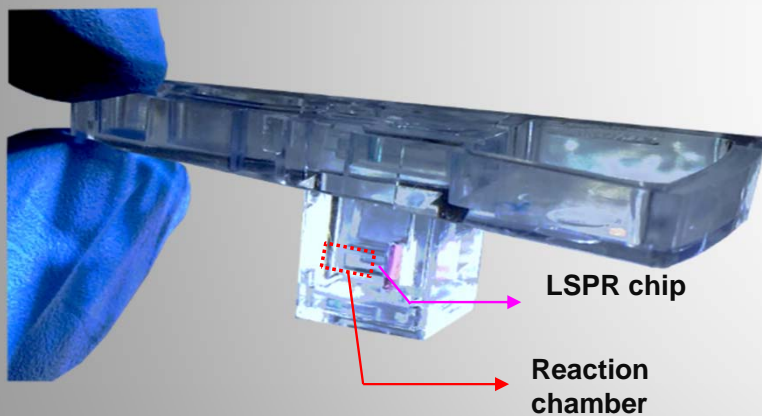
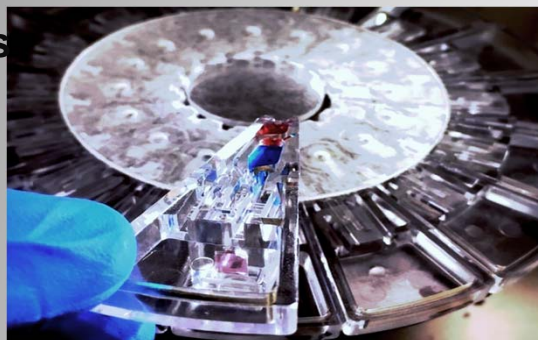
Smart Key

# Automotive

- **新發展**  
IVD元件

# 自動化微流道快篩檢測技術

16 pieces  
/cycle

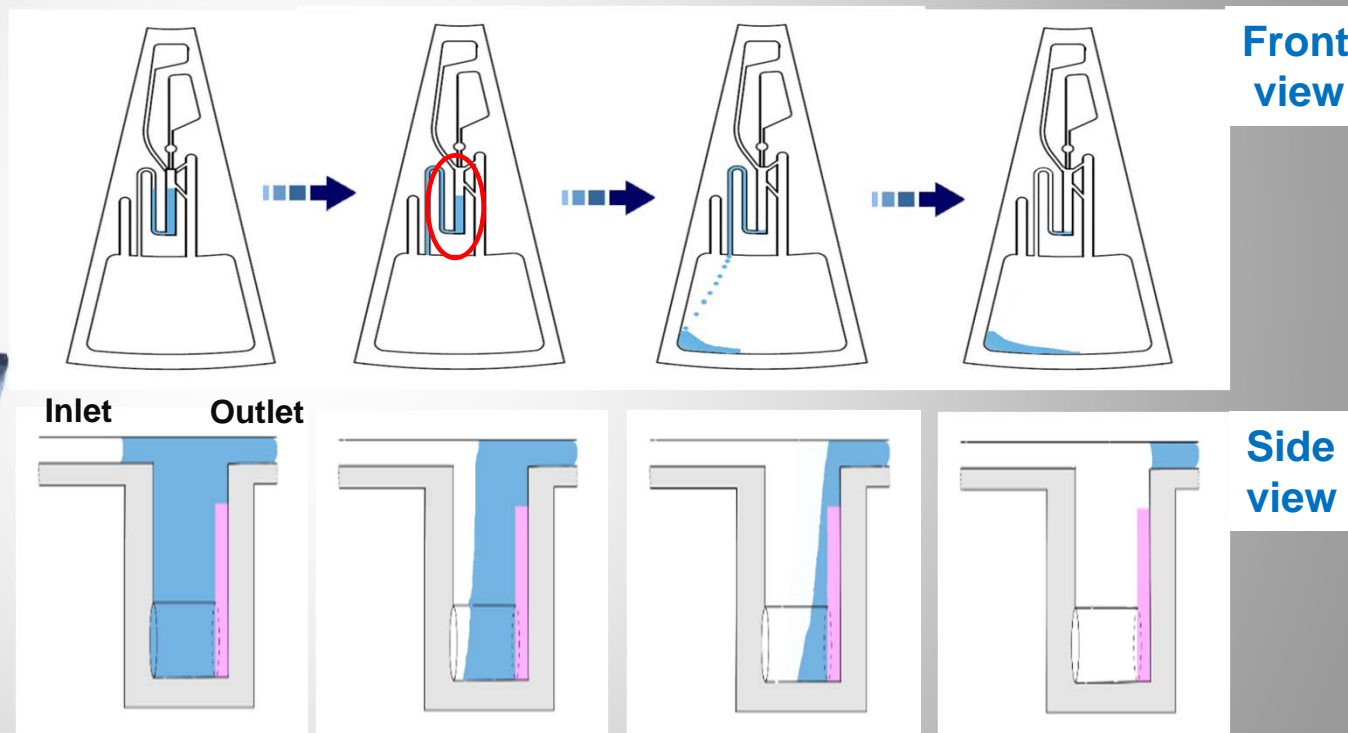


**Filling**  
3000 RPM

**Priming**  
0 RPM

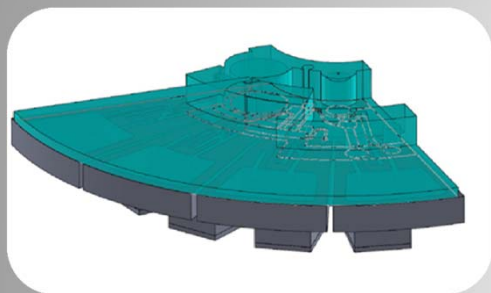
**Draining**  
3000 RPM

**Stop**  
0 RPM



# 微流道快篩感測晶片 及其搭載藍芽連線離心式光學檢測裝置

微流道感測晶片



自動化離心光學檢測裝置



藍芽



上傳雲端  
 檢體分析

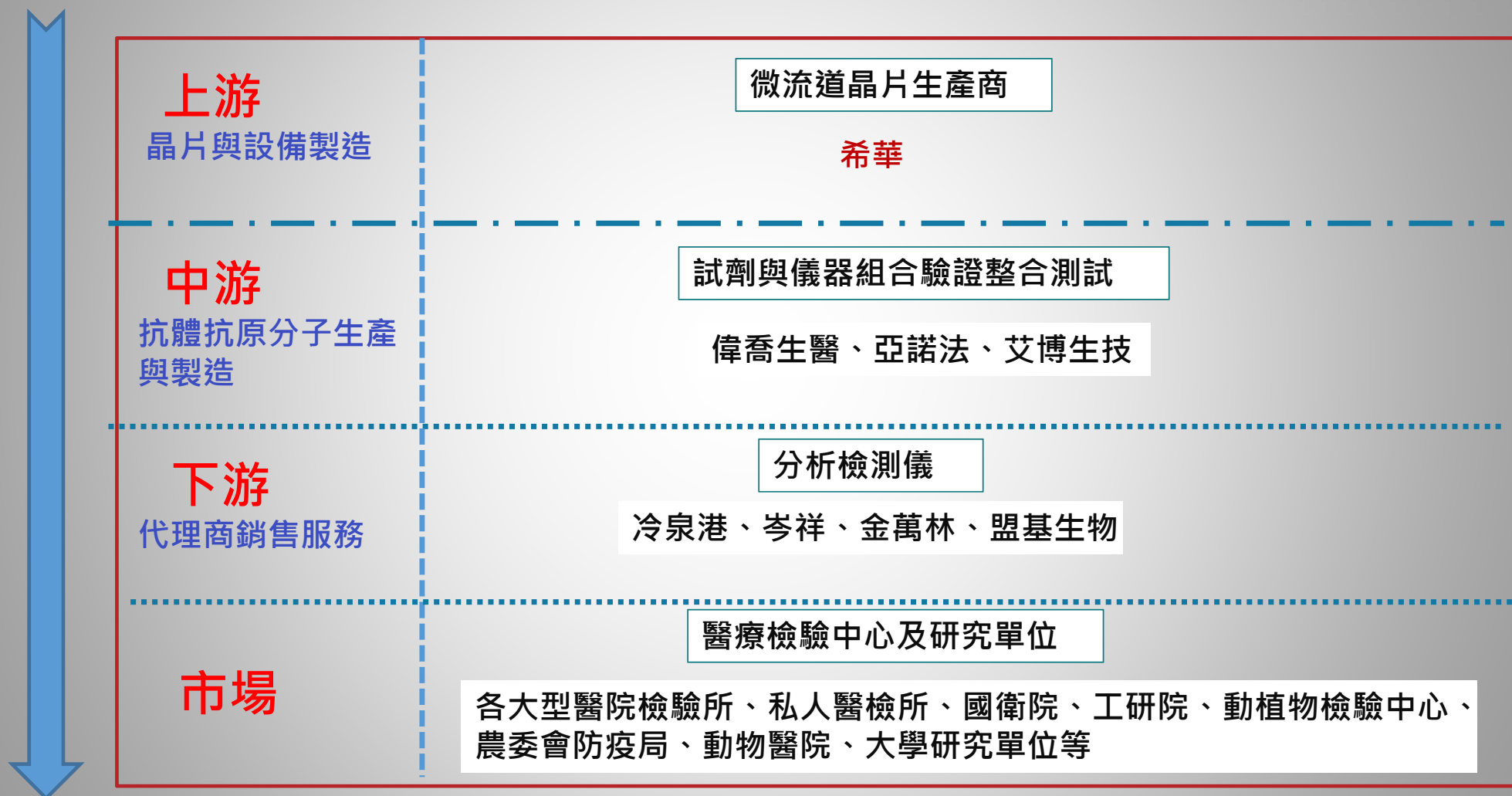


- 目前正在開發項目:
- 寵物方面: 內分泌, **甲狀腺素T4, 快速定量檢測。**
- 人醫方面: 腎毒素(尿毒素); 硫酸吲哚酚(IS), 快速定量檢測。

## 感染性病毒檢測技術 (台灣本土廠商為主)

廠家	希華晶體	公司A	公司B
檢測技術	微流道離心式快篩碟片	微流道生物檢測碟片	側流式快篩試紙
檢測種類	抗原抗體、 <b>小分子檢測</b>	抗體抗原檢測	抗體抗原檢測
檢測時間	30 分鐘	12 分鐘	15 分鐘
時效率(16時計)	<b>512 test</b>	192 test	-----
設備成本	<b>低</b>	中等	無
優點	自動化且快速、可移動式	自動化且快速、可移動式	即拆即用快速
缺點	單價較快篩貴	檢測量能低	靈敏度差

# 晶片銷售-串聯上中下游廠商去執行



- **總結 Q&A**  
法人說明會

**Thank You**  
for your attention!

[www.seward.com](http://www.seward.com)

TRUSTED. COURTEOUS. ACCOUNTABLE.  
**SEWARD**