



法人說明會

108年09月

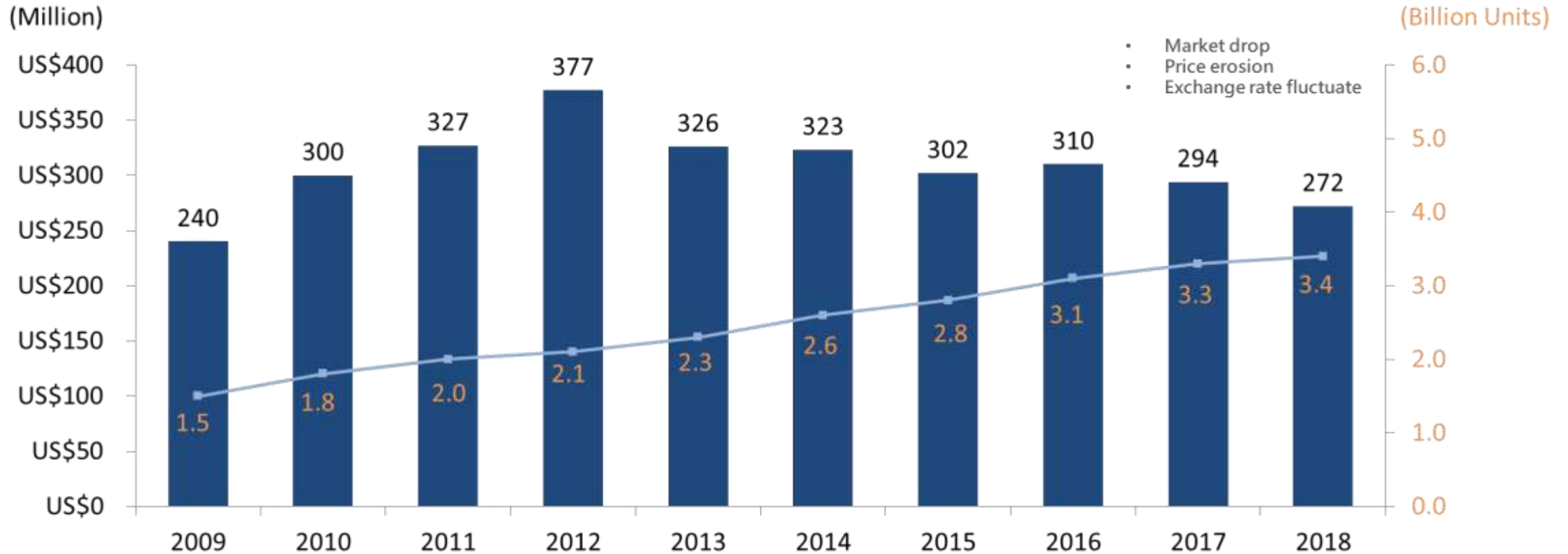
Disclaimer

- Except for statements in respect of historical matters, the statements in this release are forward-looking statements. Such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual performance, financial condition or results of operations of TXC to be materially different from what may be implied by such forward-looking statements.
- The financial forecasts and forward-looking statements in the release reflect the current belief of TXC as of the date of this release and TXC undertakes no obligation to update these forecasts and forward-looking statements for events or circumstances that occur subsequent to such date.
- The statements in respect of historical matters may contain unaudited information, which may have certain deficiency or weakness so as not to fairly present financial condition or the results of operations of TXC.

財務績效

財務報告, 每股盈餘, 每股股利, 資本支出

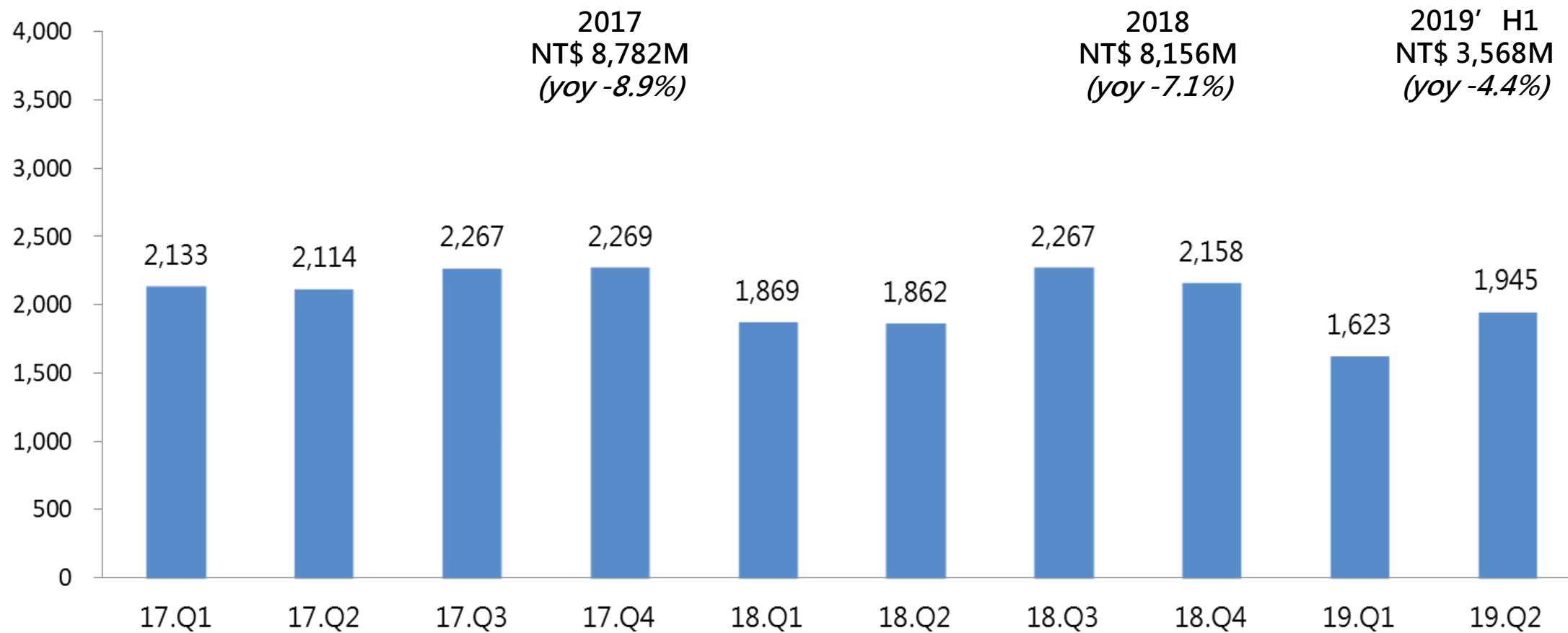
歷年營收與出貨紀錄



每季財務績效

營收

單位: 新台幣百萬元

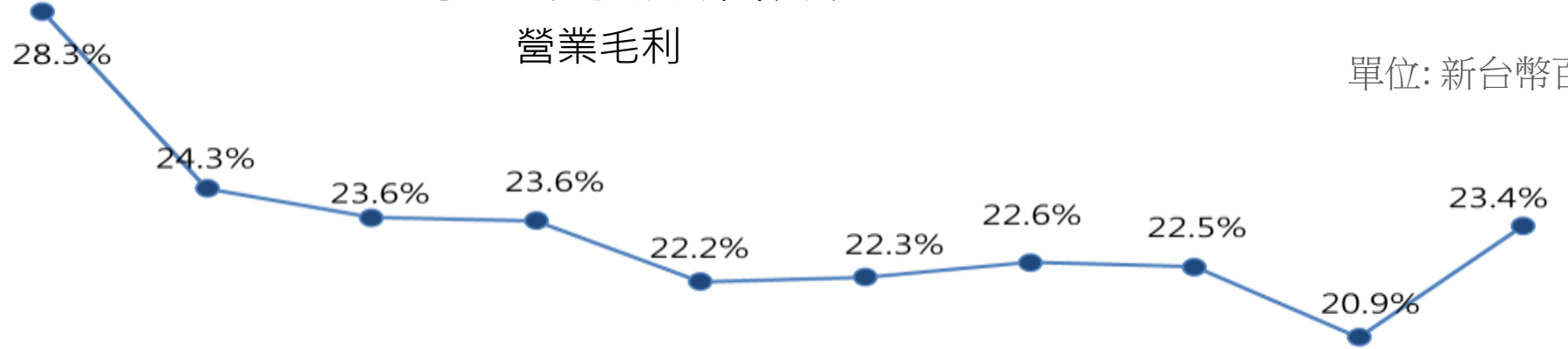


每季財務績效

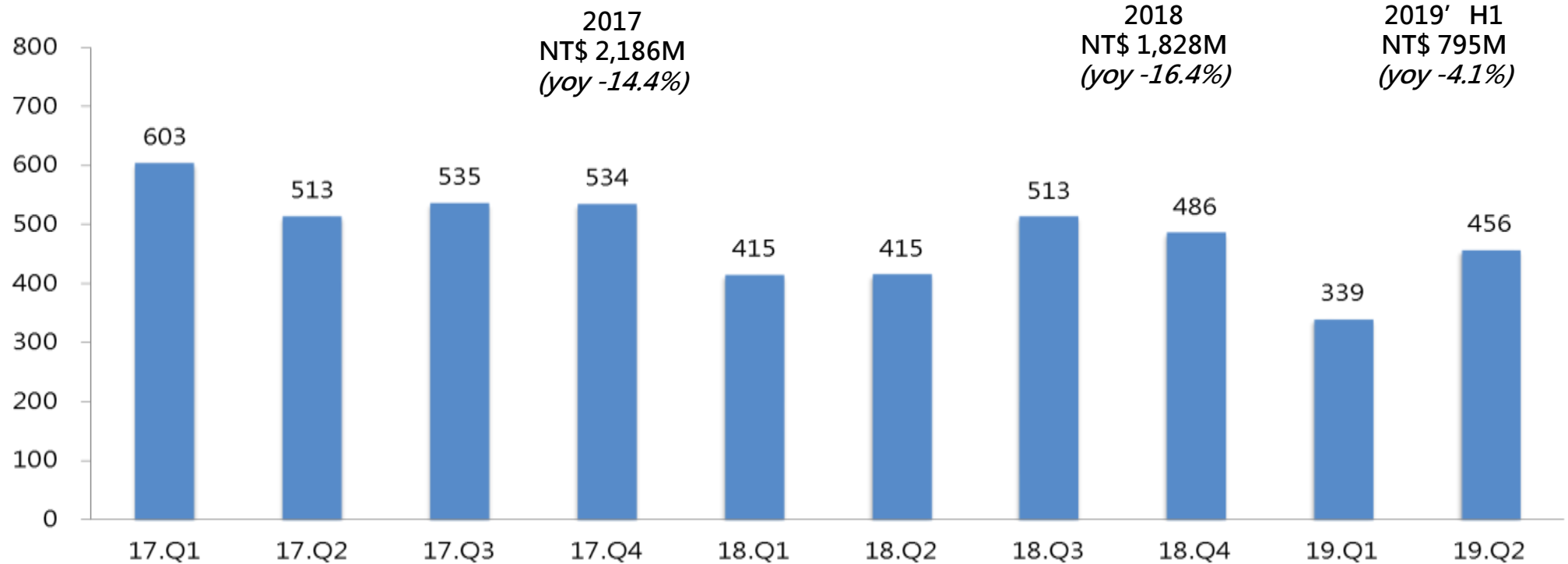
營業毛利

單位: 新台幣百萬元

毛利率(%)



營業毛利



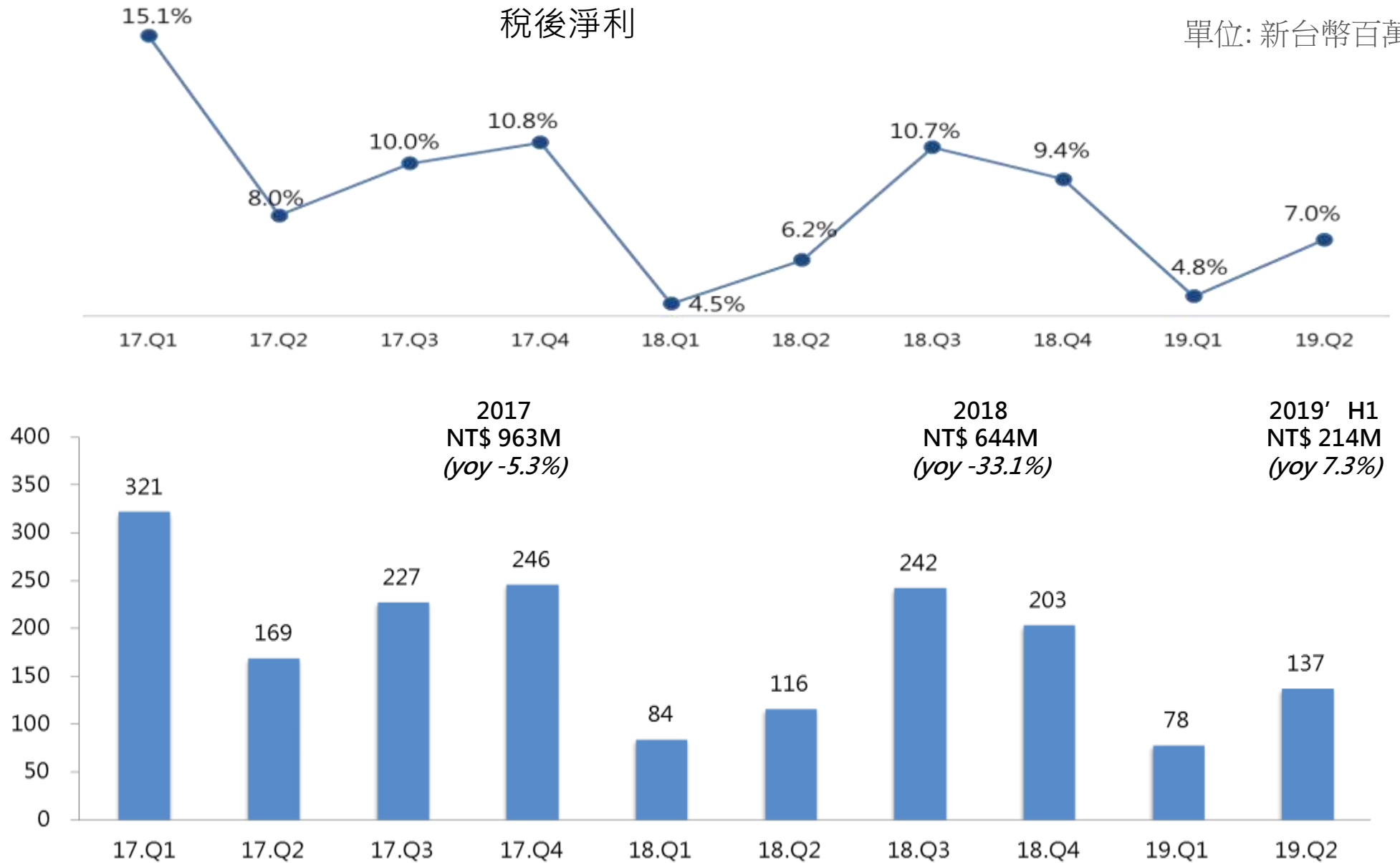
每季財務績效

稅後淨利

單位: 新台幣百萬元

純益率%

稅後淨利



合併損益表

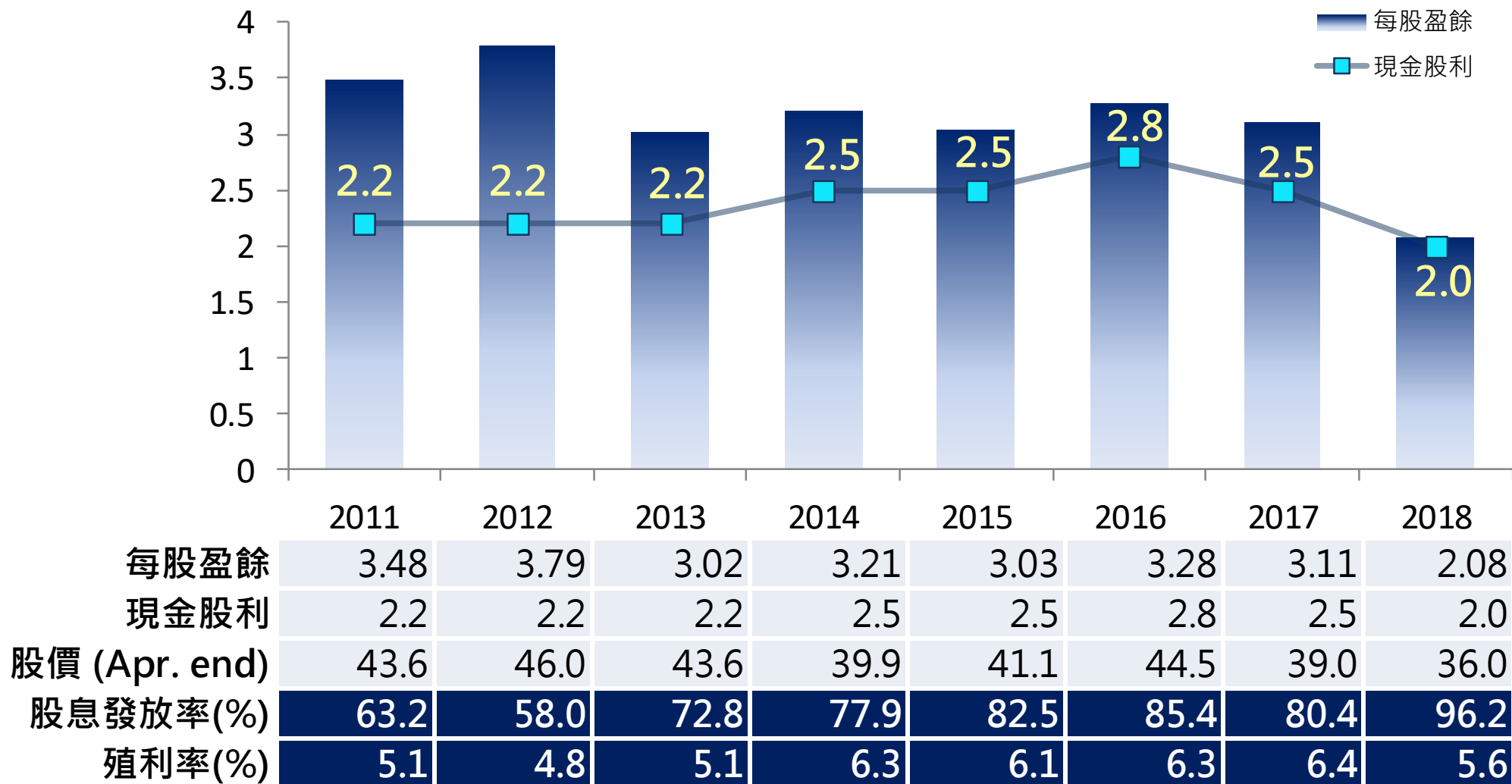
單位：\$NT 仟元	2016	2017	2018	2019 Q1	2019 Q2	2019 H1
營業收入	9,637	8,782	8,156	1,623	1,945	3,568
營業毛利	2,554	2,186	1,828	339	456	795
營業淨利	1,114	802	533	58	133	191
營業外收入及支出	78	273	200	29	28	57
稅前淨利	1,192	1,075	733	86	161	247
稅後淨利	1,016	963	644	78	137	214
(歸屬於母公司業主)						
基本每股盈餘(新台幣元)	3.28	3.11	2.08	0.25	0.44	0.69
營業毛利率(%)	26.5%	24.9%	22.4%	20.9%	23.4%	22.3%
營業淨利率(%)	11.6%	9.1%	6.5%	3.6%	6.8%	5.3%
營業費用率(%)	14.9%	15.8%	15.9%	17.4%	16.6%	16.9%
稅前淨利率(%)	12.4%	12.2%	9.0%	5.3%	8.3%	6.9%
純益率(%)	10.5%	11.0%	7.9%	4.8%	7.0%	6.0%

資產負債表

單位：\$NT 仟元	2016	2017	2018	2019 Mar.	2019 Jun.
現金及約當現金	2,093	2,331	1,426	1,771	1,942
應收票據及應收帳款	3,085	2,651	2,726	2,221	2,432
存貨	1,520	1,504	1,817	1,853	1,843
流動資產	8,818	7,983	7,117	6,956	7,370
不動產、廠房及設備	4,278	4,370	4,111	4,070	3,953
總資產	14,842	13,403	12,562	12,409	12,731
流動負債	3,156	2,277	2,089	1,947	2,567
非流動負債	1,913	1,961	1,722	1,478	1,722
總負債	5,069	4,238	3,811	3,425	4,289
合併股東權益	9,773	9,165	8,751	8,984	8,442
平均收現日數	114	119	120	139	132
平均銷貨日數	79	84	96	130	120
平均付現日數	65	73	74	79	79
流動比率(%)	279.4%	350.6%	340.7%	357.4%	287.1%
負債比率(%)	34.2%	31.6%	30.3%	27.6%	33.7%
每股淨值(元)	31.55	29.59	28.25	29.00	27.25

每股盈餘與每股股利

單位: 新台幣元



2019 資本支出計畫

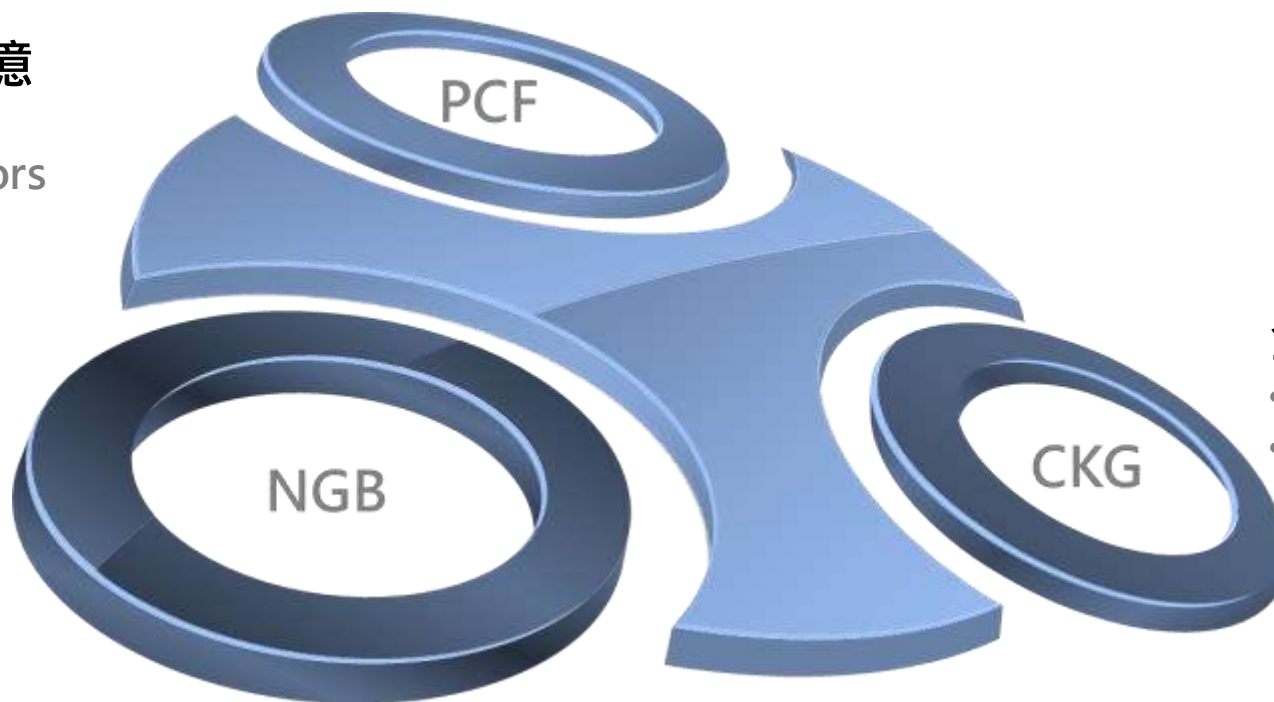
單位: 新台幣元

金額: 3.4億

- MEMS
- Oscillators

金額: 2.3億

- SMD Crystal
- ACAP Crystal



金額: 1.5億

- SMD Crystal
- Facility

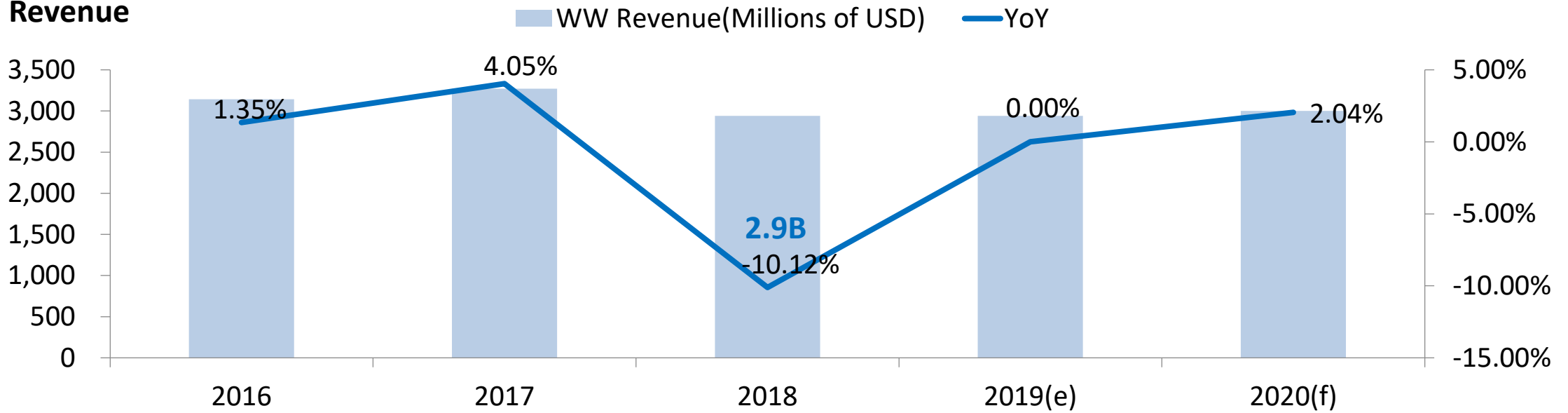
總金額: 7.2億

市場展望

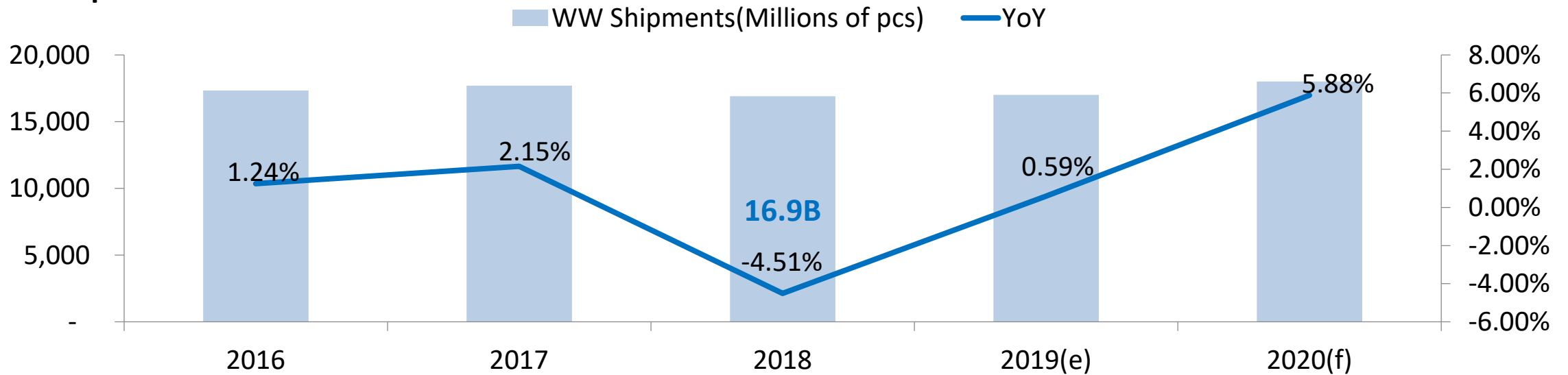
產值, 排名, 產品應用

石英元件產值

Revenue



Shipment



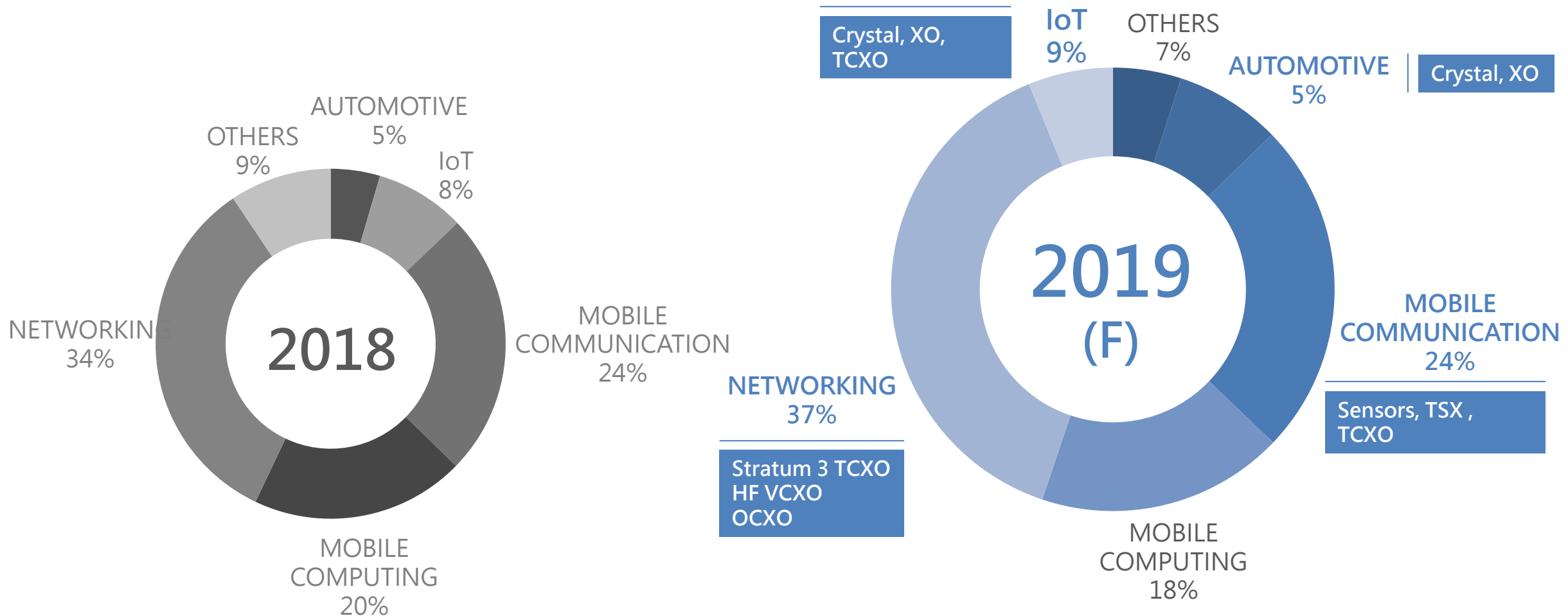
市場排名

2017 Rank	2018 Rank	Company Name	Revenue(M)			Market Share(%)	
			2017	2018	Percent Change	2017	2018
1	1	Seiko Epson	\$382	\$365	-4.5%	11.7%	12.4%
2	2	NDK	\$354	\$358	1.1%	10.8%	12.2%
3	3	KCD	\$344	\$285	-17.1%	10.5%	9.7%
4	4	TXC	\$294	\$272	-7.5%	9.0%	9.3%
5	5	KDS	\$205	\$191	-6.8%	6.3%	6.5%
7	6	SIWARD	\$104	\$95	-8.7%	3.2%	3.2%
9	7	Hosonic	\$98	\$94	-4.4%	3.0%	3.2%
10	8	Harmony	\$98	\$90	-8.2%	3.0%	3.1%
n/a	9	Diode - Pericom / Saronix	n/a	\$90	n/a	n/a	3.1%
8	10	MegaChips (SiTime)	\$103	\$85	-17.4%	3.7%	2.9%
		Other Companies	\$1,289	\$1,015	-21.3%	38.8%	34.5%
		Total Revenue	\$3,271	\$2,940			

Source: 2019/5 CS&A

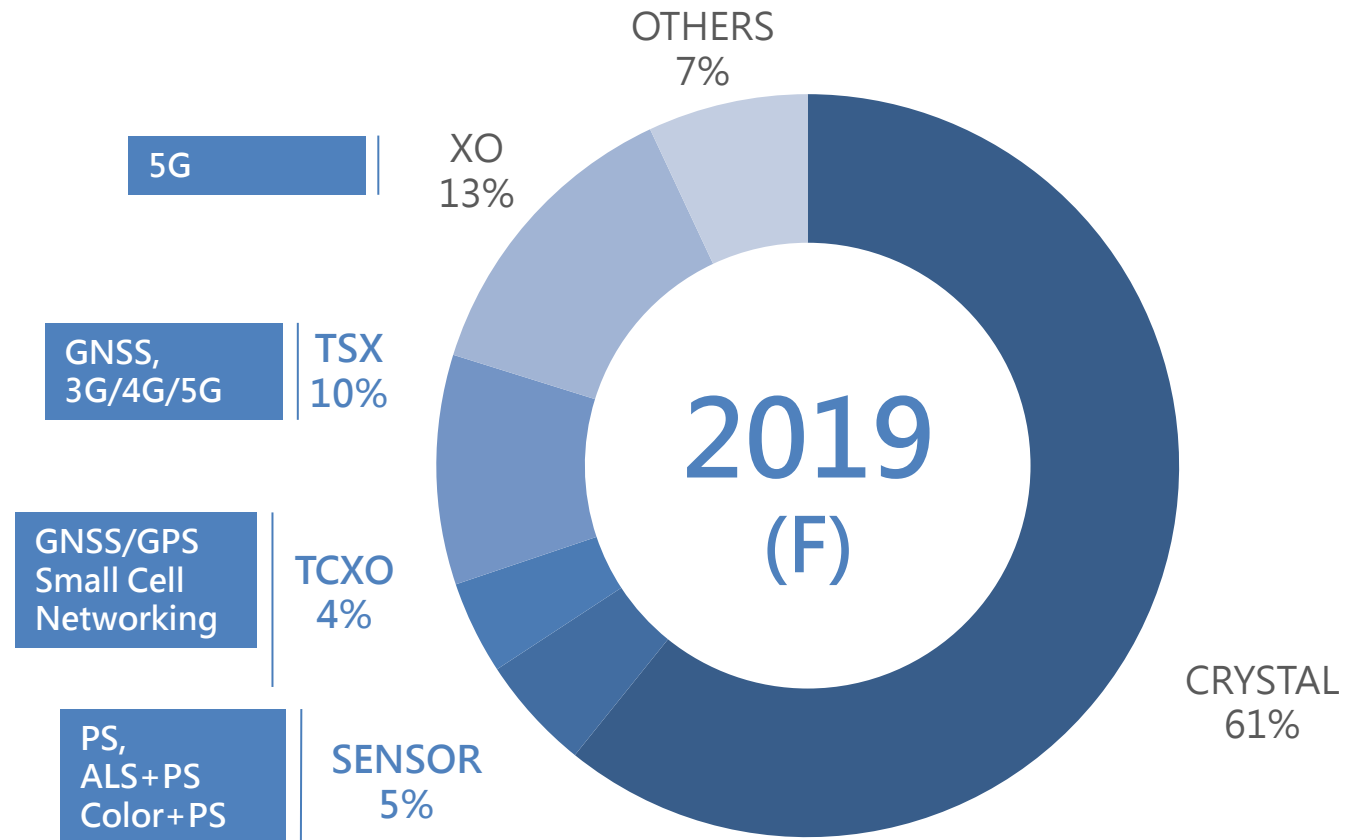
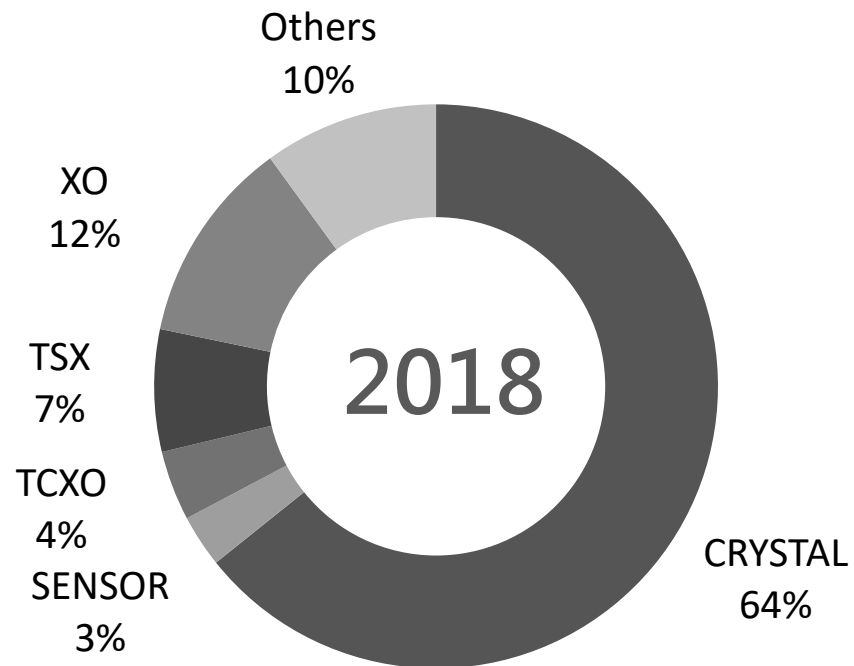
TXC's 產業別銷售比重

實際 與 預估



TXC' s 產品別銷售比重

實際 與 預估



成長潛力

- 新產品開發

5G NR 標準發展

3 Main Types of Usage Scenario – eMBB, mMTC & uRRLC



Deployment as the first priority per 3GPP Rel. 15

Growth driver of 5G sub-projects

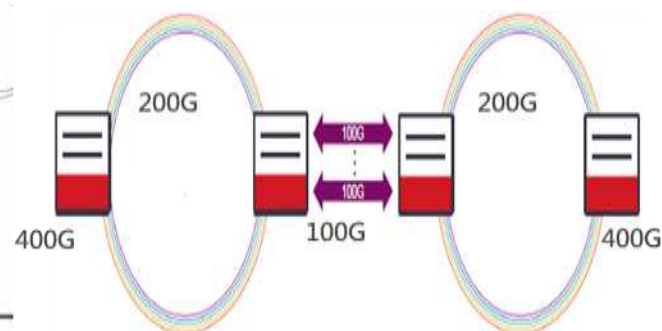
Base Station



Small Cell



Optical Communication



Wi-Fi 6



5G 市場動力

Network Infrastructure

Base Station(BBU/RRU)
Small Cell
Optical Module

WiFi - 6

XTAL & OSC Usage:
1-2pcs

5G Smartphone

XTAL & OSC Usage:
5-10pcs

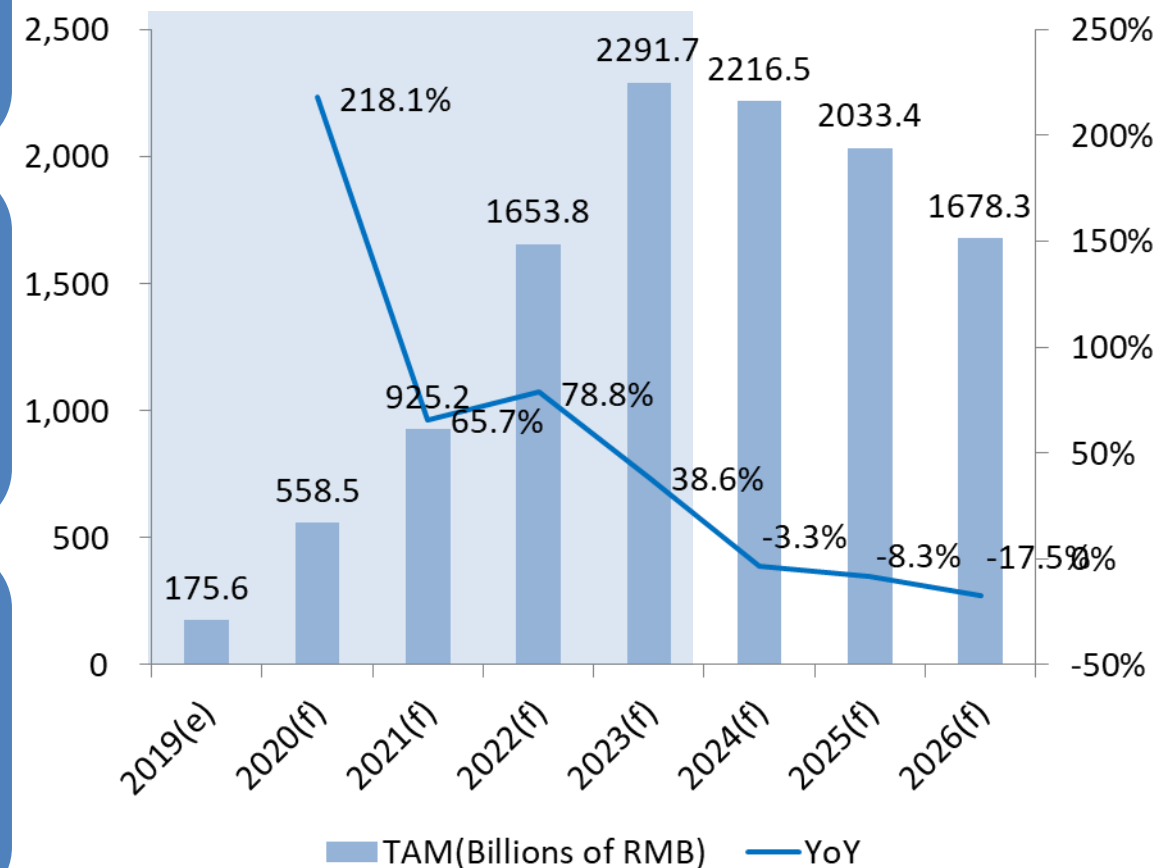
IoT

NB-IoT AP Router
LoRa HUB
M2M Automotive

XTAL & OSC Usage:
10-100pcs

XTAL & OSC Usage:
2-6pcs

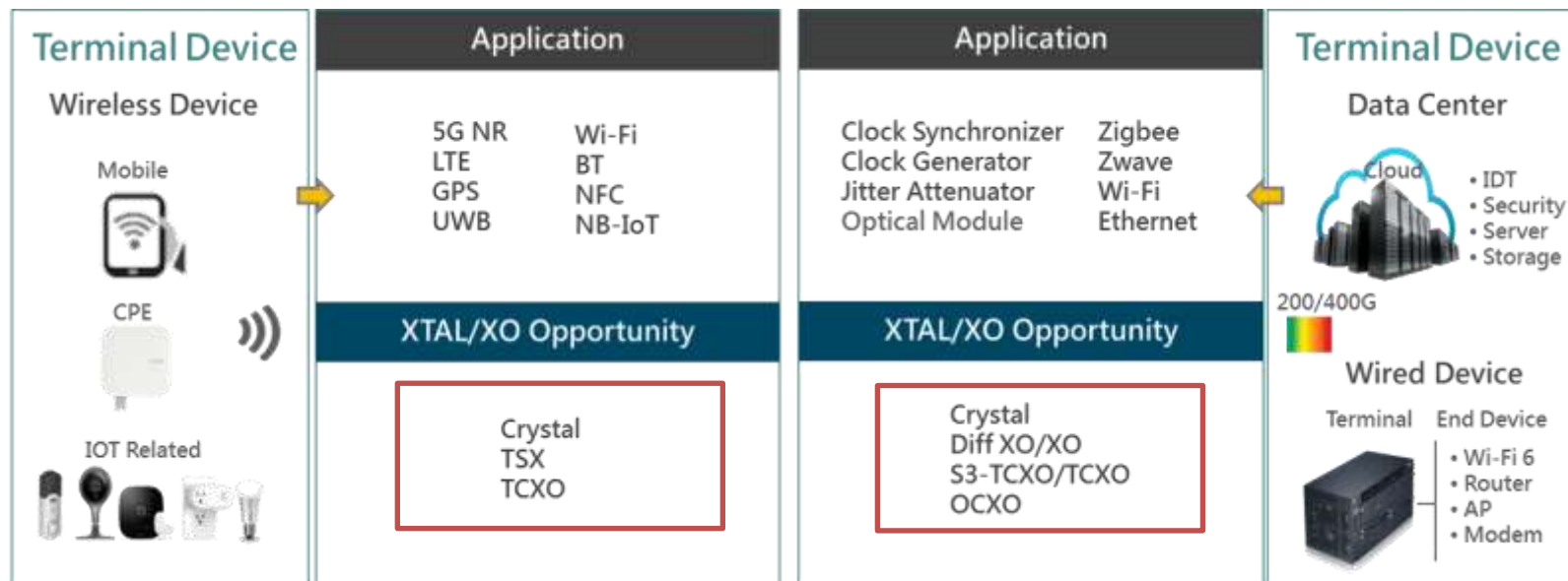
5G CAGR 67% from 2019 to 2023



Source: CCID Thinktank

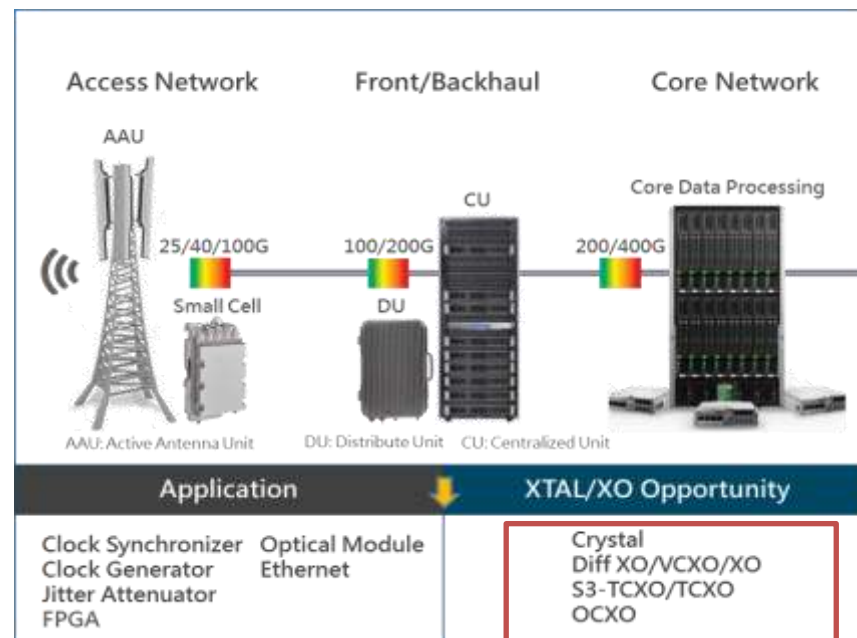
5G 所需相關頻率元件產品

- 手機
- CPE
- IOT/AIOT

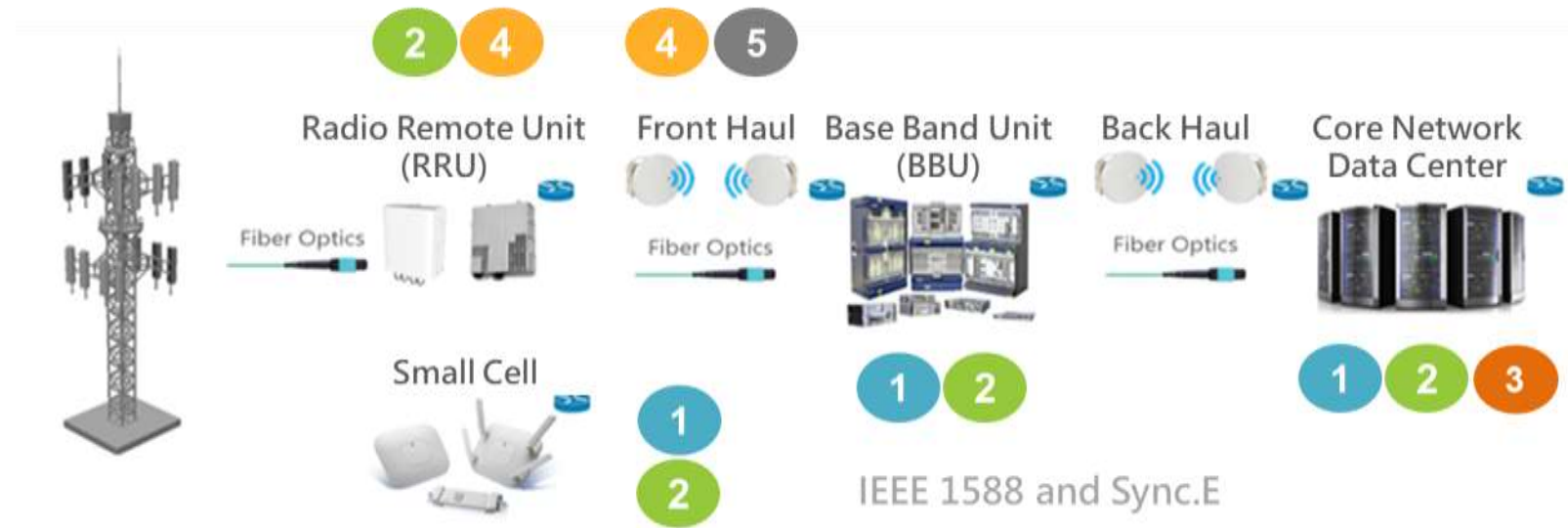


- Data Center
- AP/Router
- Modem

- Infrastructure



網通設備相關石英元件產品方案



1

Ultra Stability SMD SC-Cut OCXO (9.7x7.5mm)+/-10ppb



2

Ultra Stability S3 TCXO (7.0x5.0mm, 5.0x3.2mm); +/-100ppb

3

High Frequency, XO/VCXO (7.0x5.0mm); Up to 2.1GHz, ultra low jitter 0.15pS

4

Ultra Low Phase Noise VCXO (3.2x2.5mm); Close-in phase noise -80dBc/Hz

5

High Frequency Crystal (MESA 3.2x2.5mm); 200MHz

WiFi 在5G世界持續影響

AP Router ♦

3.2x2.5mm/2.5x2.0mm/2.0x1.6mm
Ceramic Package

♦ NB-IoT

Gateway-Carrier ♦

♦ M2M

STB/OTT ♦



♦ Smart Speaker

Gaming ♦



♦ Wearable

Smart TV ♦



♦ Automotive

Smart Phone ♦



♦ AI/Robotics



- Small
- High Frequency
- High Temperature

Source: WiFi Forum

IoT市場成長動力

Intelligent

Worldwide
Sensors
CAGR 11.3%
(2016 to 2021)

Forecasted
U\$241B
by 2021 (AMR)

Growing usage of all sorts
of sensors and AI

Connected

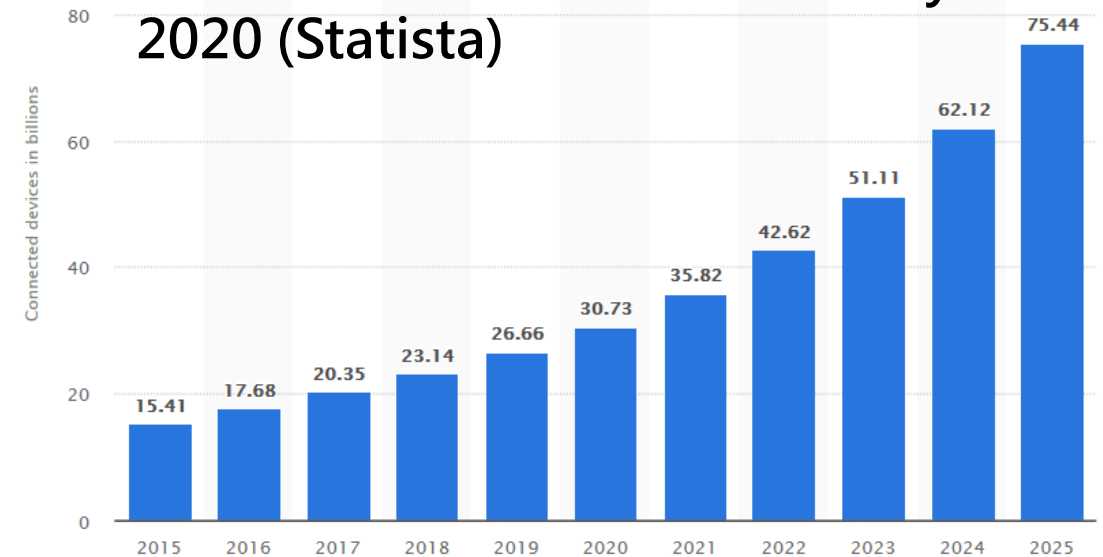
Worldwide
Crystals and
Oscillators
CAGR 1.4%
(2016 to 2020)

Forecasted
U\$3.5B
by 2020 (CS&A)

Increasing usage,
decreasing in price

Things

30 Billion Connected Devices by
2020 (Statista)



Massive number of devices are being
embedded with sensors and connectivity

TXC新產品發展

Crystal

- Miniaturization
- High Freq
- High Drive Level
- Wide OTR

Oscillator

- High Freq
- Ultra Stability
- Ultra Low Noise
- Wide OTR

EMI Oscillator Module

- EMI IC Integration

Light Sensor

- Under Display Color Sensor

IR Thermal Sensor (Thermopile)

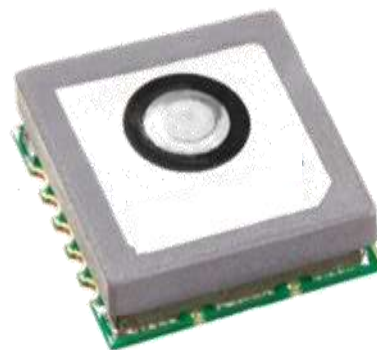
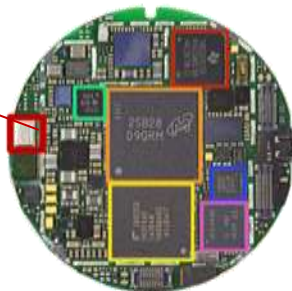
IR Thermal Image Sensor (uBolometer)

Diversification & Strategic alliance

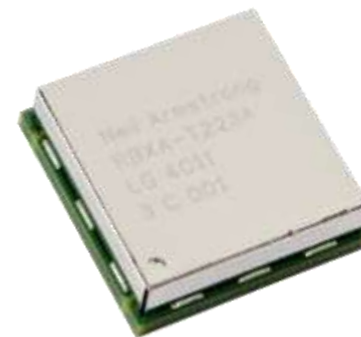
- Ceramic Package Solutions,
Assembly & Contract
Manufacturing

小型化、薄型化石英元件

Miniature and low profile 1.0x0.8x0.3mm Crystals for Compact size module applications

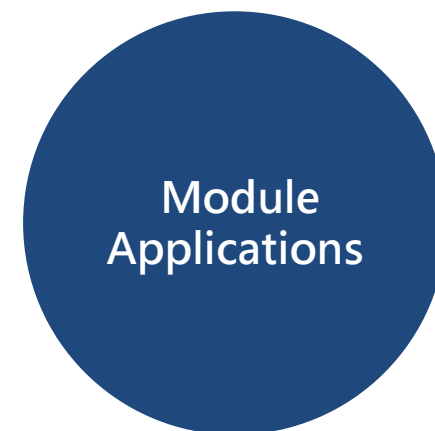


GNSS/GPS
Module

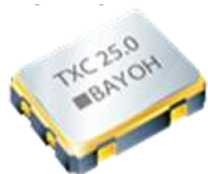


WiFi, BT/BLE, ZigBee
Module

Source: ublox, OriginGPS



Miniature and low profile 1.6x1.2mmx0.6mm Oscillators



光感測元件

**Single Aperture
Combo Light Sensor
(ALS/RGB+PS)
2.5x2.0mm**



**Slim Bezel
Combo Light Sensor
(ALS/RGB+PS)
3.4x1.2mm**



**Miniature
Proximity Sensor
2.0x1.6mm**



TXC 車用聚焦產品與方案

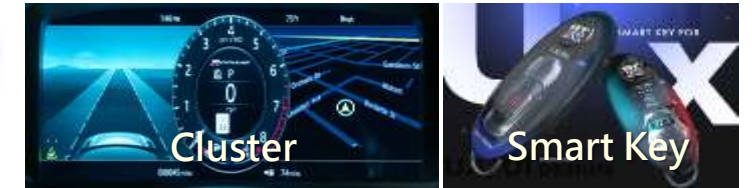
Infotainment & Telematics System

Crystal/XO: 5-10 units



Security Electronic System

Crystal/XO: 7-12 units



Safety Electronic System

Crystal/XO: 8-14 units



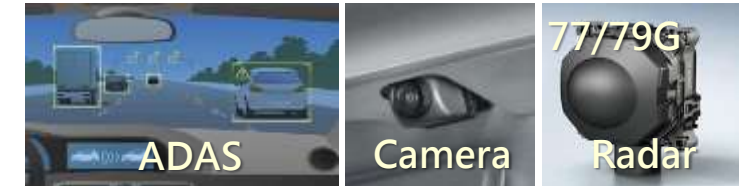
Tire Pressure Monitoring System

Crystal: 5 units (4T & 1R)



Advanced Driver Assistance System

Crystal/XO: 10-16 units



Crystal (AEC-Q200 Compliant)

Glass (G0)

AX(8.0x4.5mm, 2pad)
AA(5.0x3.2mm, 2pad)
AV(3.2x2.5mm, 2/4 pad)
AR(2.0x1.6mm, 2pad)

Seam (G1)

AB(5.0x3.2mm, 4pad)
AM(3.2x2.5mm, 4pad)
AZ(2.5x2.0mm, 4pad)
AY(2.0x1.6mm, 4 pad)
AJ(1.6x1.2mm, 4 pad)

TSX (G2)

AE(2.5x2.0mm, 4pad)
AF(2.0x1.6mm, 4pad)
AG(1.6x1.2mm, 4pad)

Oscillator (AEC-Q100 Compliant)

XO (G1)

AU(3.2x2.5mm, CMOS)
AW(2.5x2.0mm, CMOS)
AN(2.0x1.6mm, CMOS)
A5(1.6x1.2mm, CMOS)

TCXO (G2)

AQ(3.2x2.5mm, CS)
AL(2.5x2.0mm, CS)
AK(2.0x1.6mm, CS)

G0: -40 to 150 °C
G1: -40 to 125 °C
G2: -40 to 105 °C
G3: -40 to 85 °C

車用輔助系統影像方案

Automotive



Source: Yole, Tesla, Sony



Active Low EMI OSC Module

Automotive G1
2.5x2.0mm
2.0x1.6mm

總結

- Market competition is always at intense
- Product specifications getting rigorous
- Exchange rate fluctuations in the dollar, Yen, CNY
- **Risk and impact of US protectionism -
Slowing down global productivity and
trends – would likely to hit Asia, and China
in particular**

- Speed up the development of new revenue-generating product lines for Automotive, 5G, IoT, Sensor
- Accelerate business strategy on product diversification and strategic alliance
- Continue to review vendors to lower the cost of goods sold and localized
- Continue to drive lean management in all aspects to maintain healthy business and increase competitiveness

問與答

法人說明會