Investor Conference

September, 2020

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 form 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.

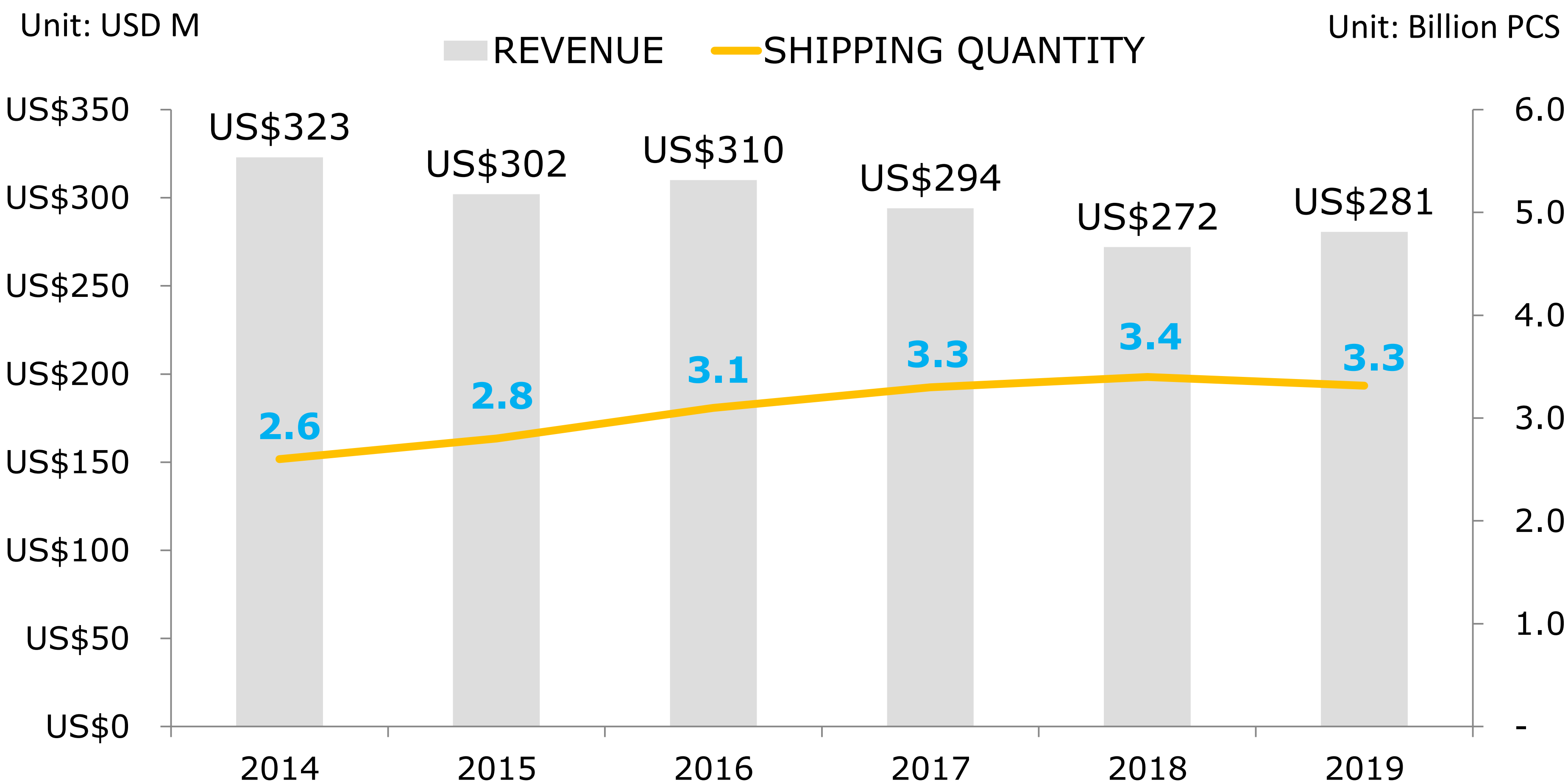
- The statements in respect of historical matters may contain unaudited information, which may have certain deficiency or weakness so as not to fairly present financial condition or the results of operations of TXC.

Financial Performance

P&L, EPS, DPS, CAPEX

Sales & Shipping Records

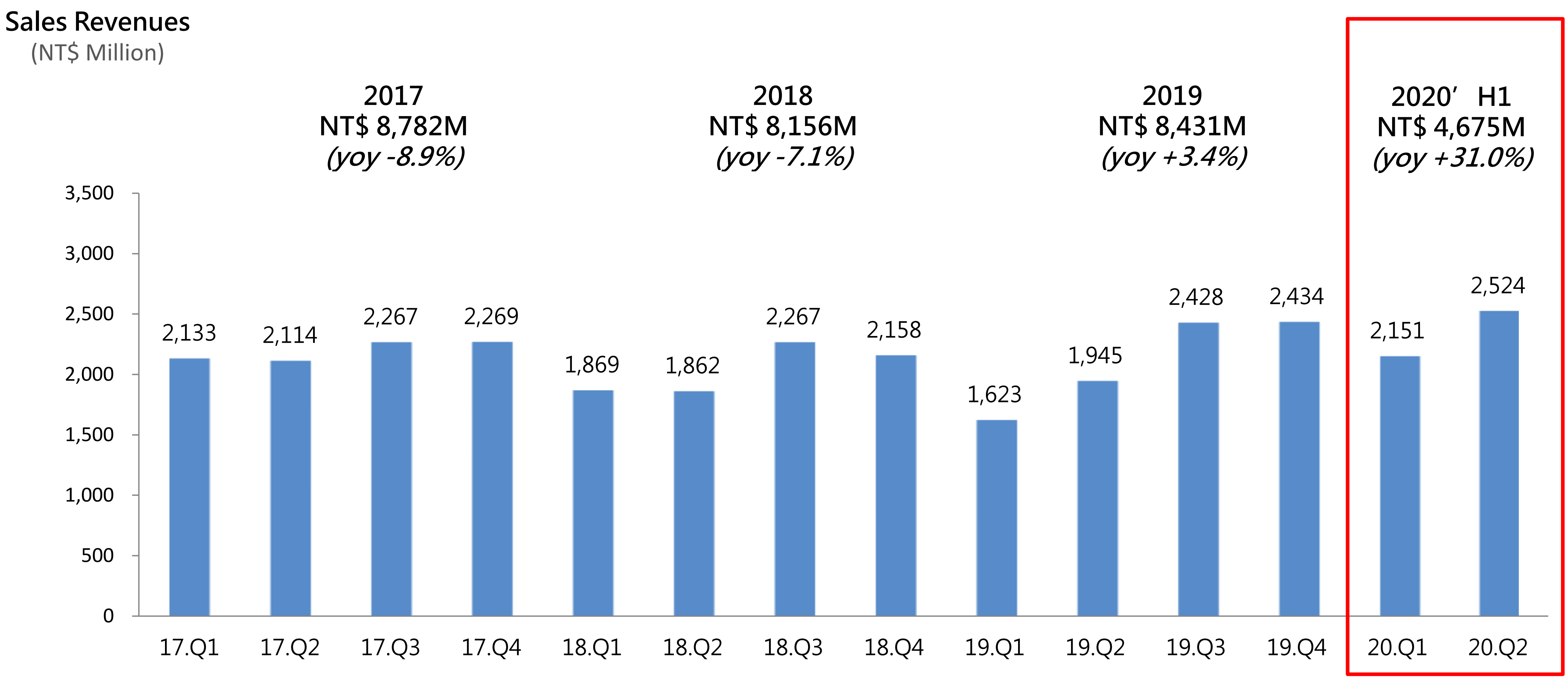
Steady and Organic Volume Growth



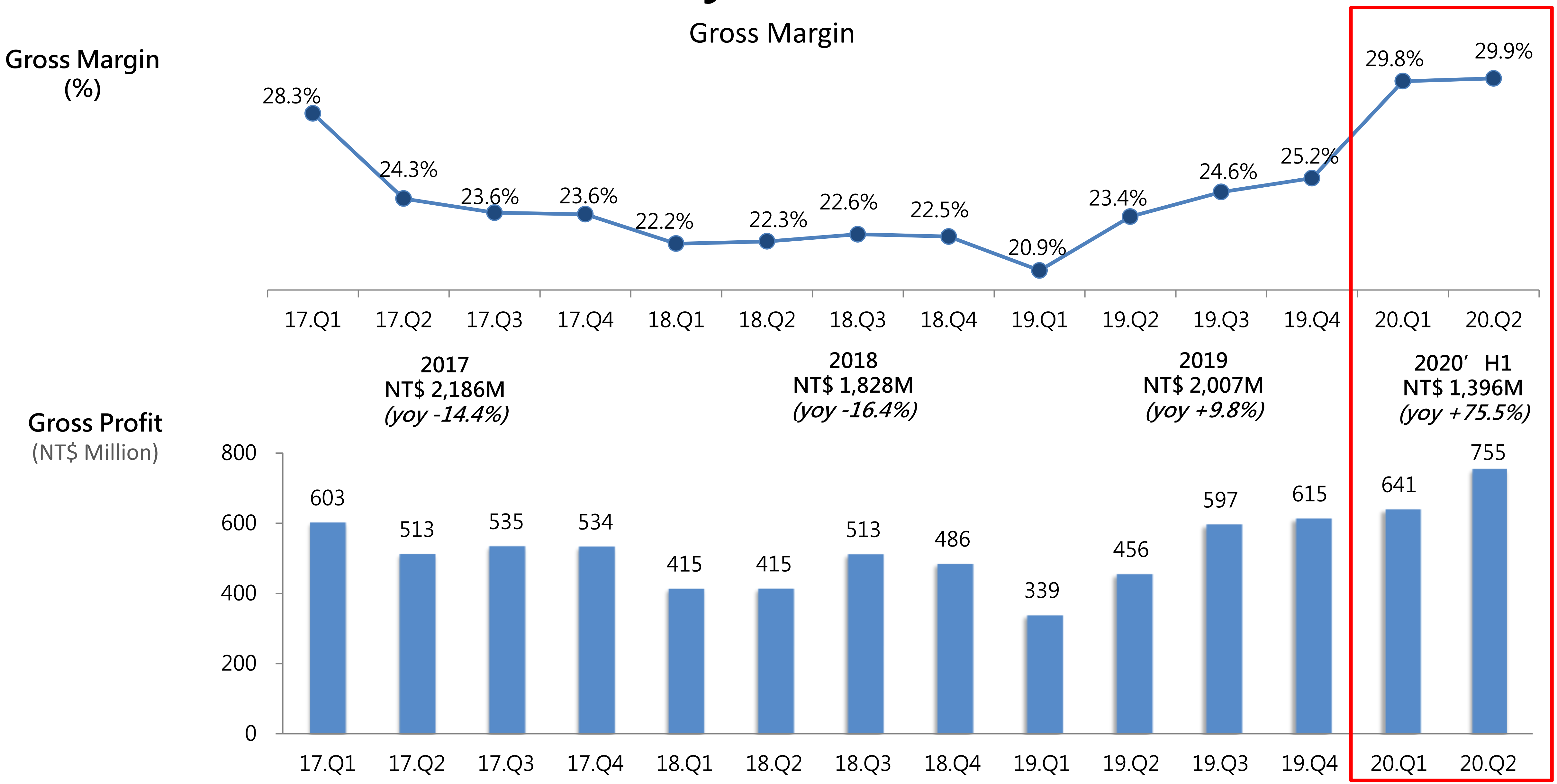
2020
FCST shipment :
> 4.0 billion pcs

Quarterly Performance

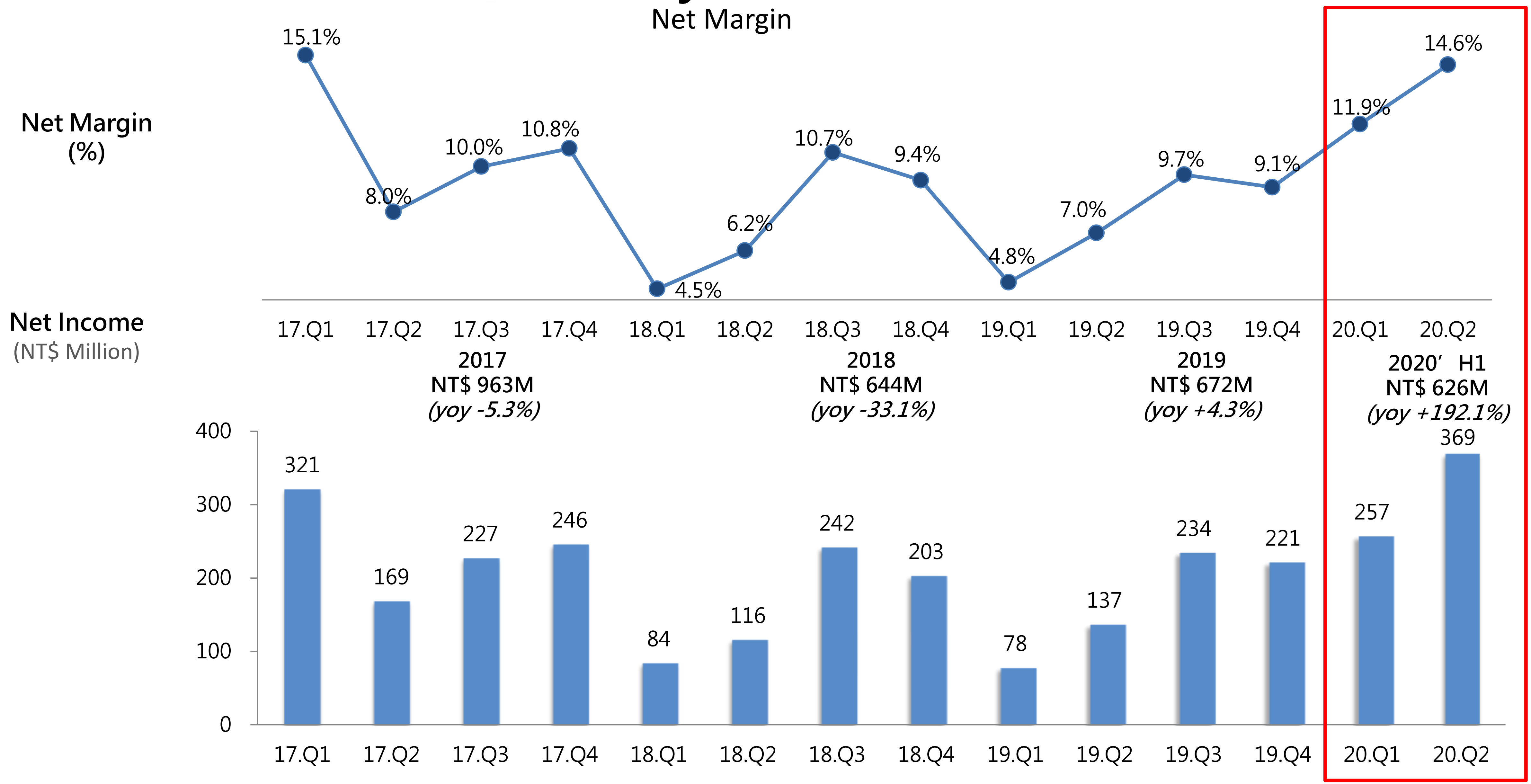
Sales Revenues



Quarterly Performance



Quarterly Performance



Statements of Comprehensive Income

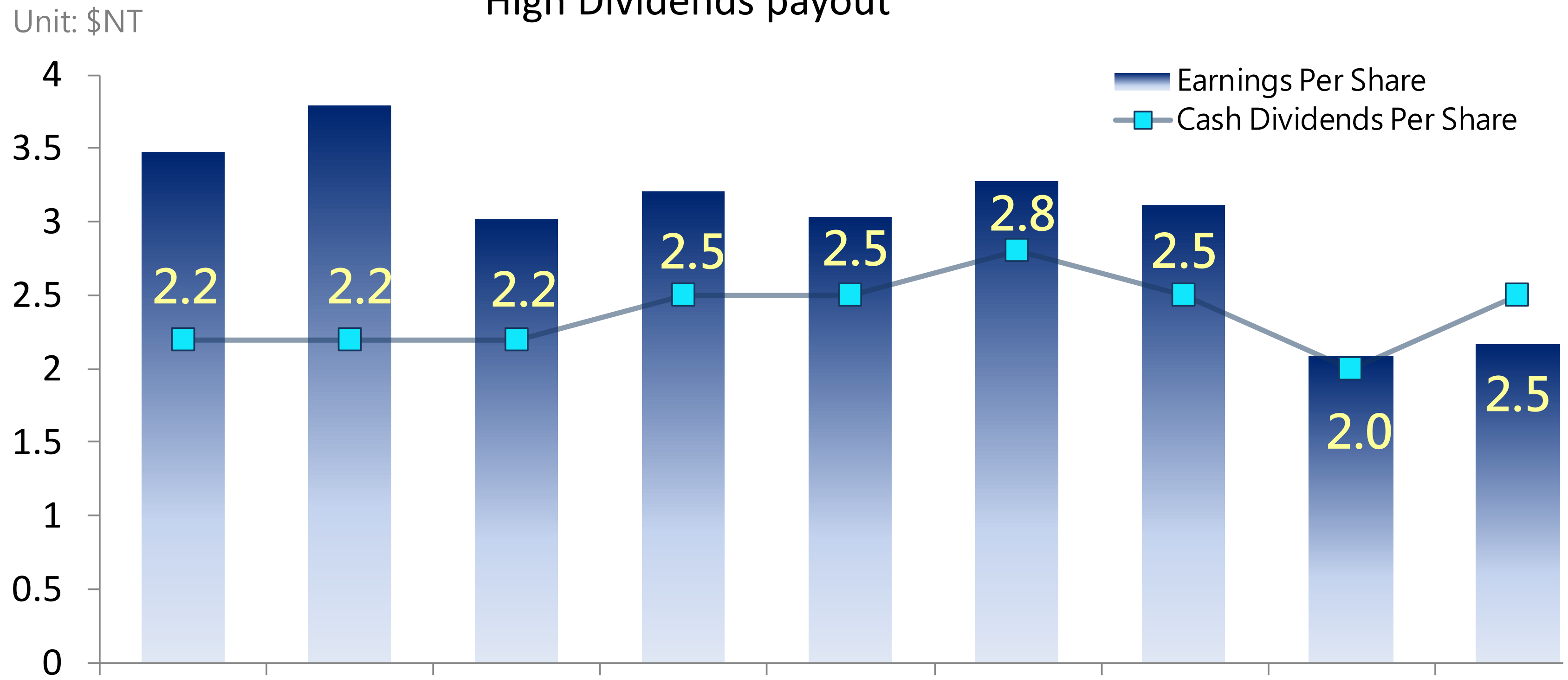
Unit : NT$ in Million	2017	2018	2019	2020 Q1	2020 Q2	2020 H1
Net Revenue	8,782	8,156	8,431	2,151	2,524	4,675
Gross Profit	2,186	1,828	2,007	641	755	1,396
Operating Profit	802	533	632	276	357	633
Non-Operating Items	273	200	132	22	56	77
Income before Tax	1,075	733	765	298	412	710
Net Income to Shareholders of the Parent Company	963	644	672	257	369	626
Basic EPS (NT$)	3.11	2.08	2.17	0.83	1.19	2.02
Gross Margin(%)	24.9%	22.4%	23.8%	29.8%	29.9%	29.9%
OPEX(%)	15.8%	15.9%	16.3%	16.9%	15.8%	16.3%
Operating Margin(%)	9.1%	6.5%	7.5%	12.8%	14.1%	13.5%
Income before Tax Margin(%)	12.2%	9.0%	9.1%	13.9%	16.3%	15.2%
Net Profit Margin(%)	11.0%	7.9%	8.0%	11.9%	14.6%	13.4%

Balance Sheet

Unit : NT$ Million	2017	2018	2019	2020 Mar.	2020 Jun.
Cash & Marketable Securities	2,331	1,305	1,986	2,059	1,981
NR+AR	2,651	2,726	2,889	2,704	2,868
Inventories	1,504	1,817	2,039	2,400	2,580
Current Assets	7,983	7,117	7,945	8,229	8,672
PP&E	4,370	4,111	4,054	4,070	4,315
Total Assets	13,403	12,562	13,369	13,817	14,556
Current Liabilities	2,277	2,089	2,797	2,753	4,318
Non-current Liabilities	1,961	1,722	1,875	2,104	1,819
Total Liabilities	4,238	3,811	4,671	4,857	6,137
Total Shareholders' Equity	9,165	8,751	8,698	8,960	8,419
A/R Turnover Days	119	120	122	119	112
Inventory Turnover Days	84	96	110	134	129
Current Ratio(%)	350.6%	340.7%	284.1%	298.9%	200.8%
Debt Ratio(%)	31.6%	30.3%	34.9%	35.2%	42.2%
Book Value Per Share(NT$)	29.59	28.25	28.08	28.93	27.18

EPS and DPS

High Dividends payout



	2011	2012	2013	2014	2015	2016	2017	2018	2019
Earnings Per Share	3.48	3.79	3.02	3.21	3.03	3.28	3.11	2.08	2.17
Cash Dividends Per Share	2.2	2.2	2.2	2.5	2.5	2.8	2.5	2.0	2.5
Stock Price (Apr.)	43.6	46.0	43.6	39.9	41.1	44.5	39.0	36.0	44.0
Payout Ratio(%)	63.2	58.0	72.8	77.9	82.5	85.4	80.4	96.2	115.2
Yields(%)	5.1	4.8	5.1	6.3	6.1	6.3	6.4	5.6	5.7

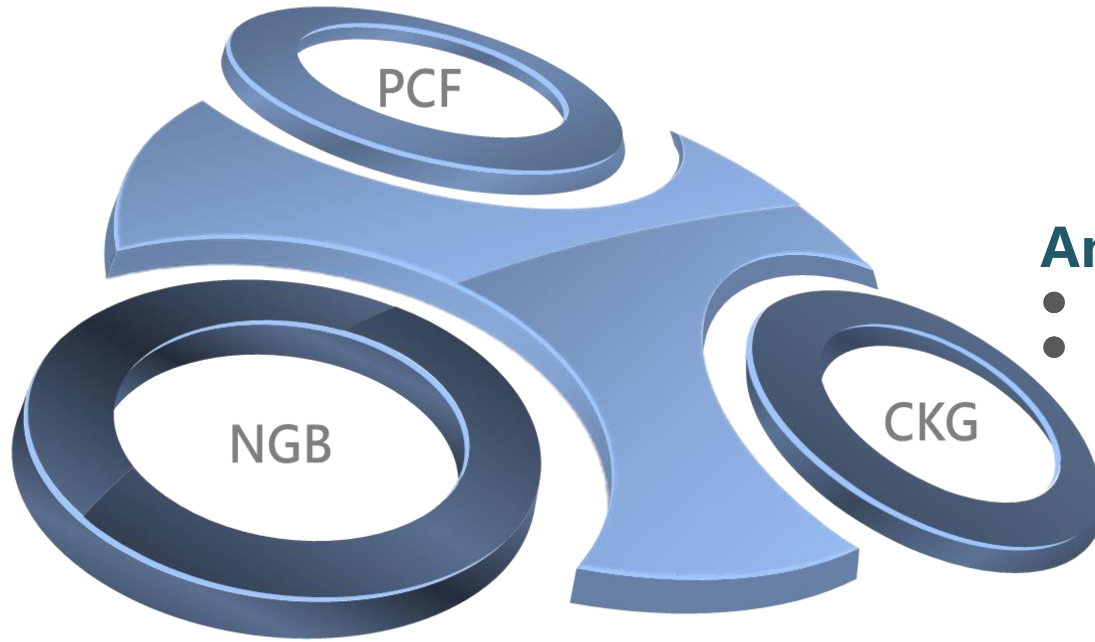
2020 Capital Expenditure

Expand the Economy of Scale

Capacity expansion for new products, and to satisfy market demands

Amount: NT$550M
- MEMS
- Miniature SMD Crystal

Amount: NT$350M
- Miniature SMD Crystal
- SMD Oscillator



Amount: NT$300M
- Facility
- Miniature SMD Crystal

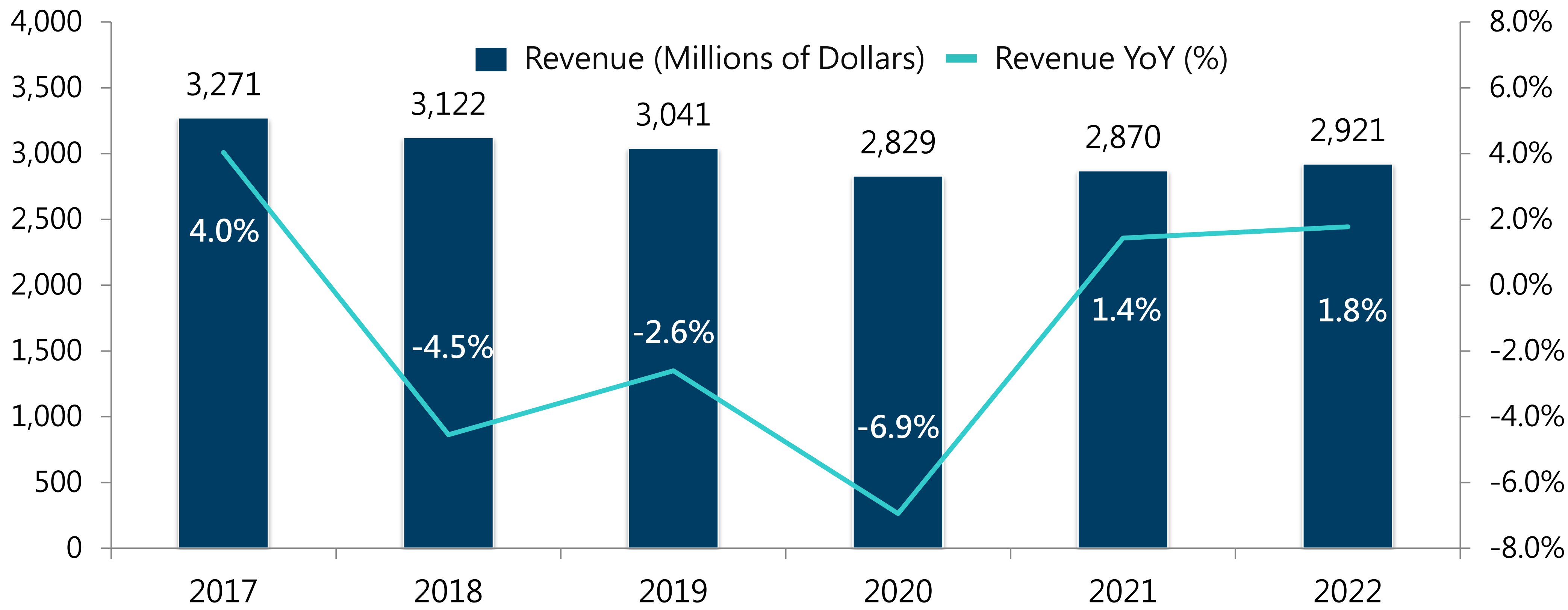
Total Amount: NT$1,200M

Market Outlook

TAM, Ranking, Sales segment breakdown

WW Timing Market Summary

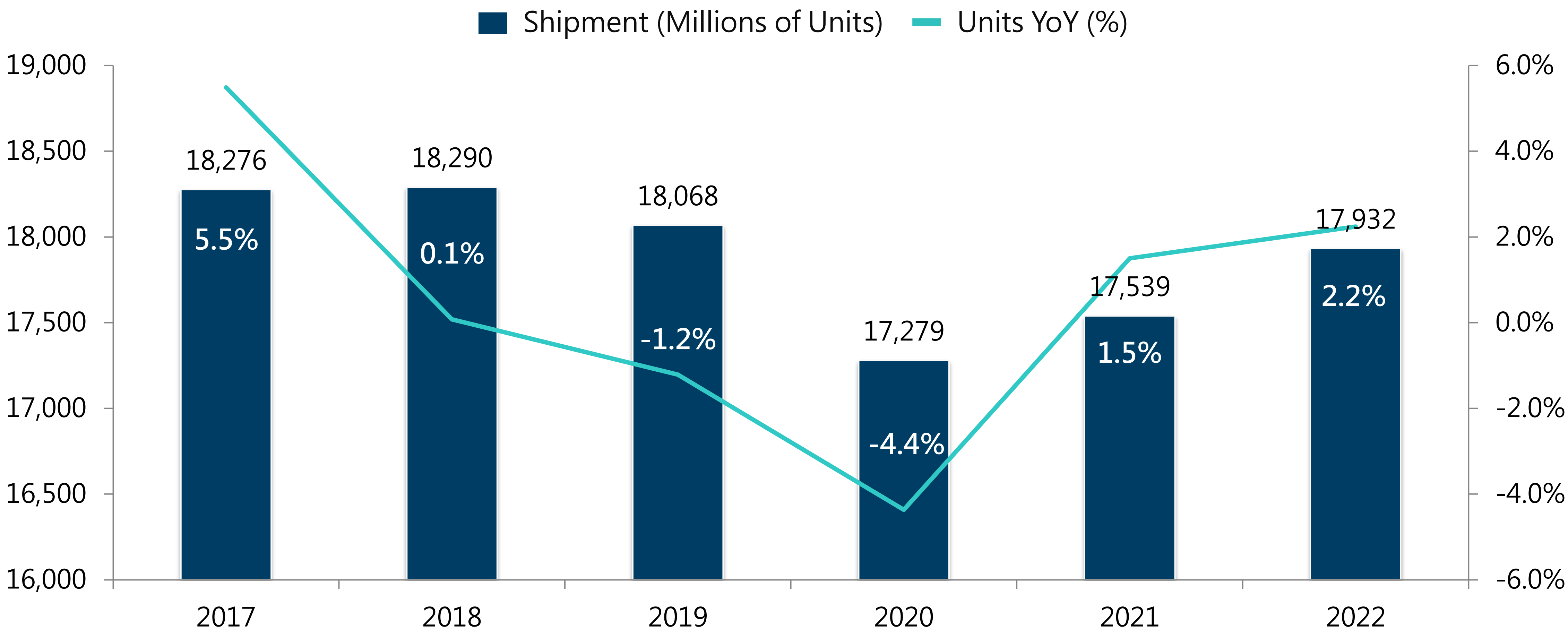
- Overall, the total market for Crystals and Oscillators decreased 2.6% in CY2019 to $3.04 billion usd.
- The semiconductor forecasts for 2020 are all over the place. No one quite knows what the real impact of COVID-19 will be on the full year. However, we still can expect the market will gain business potential back with positive growth.



Source: 2019-20 WORLDWIDE WW CRYSTAL & OSCILLATORS Report, CS&A, June 2020, TXC Estimation

WW Timing Market Summary

Forecasting Stable growth during 2020-2022



Source: 2019-20 WORLDWIDE WW CRYSTAL & OSCILLATORS Report, CS&A, June 2020, TXC Estimation

WW Timing Market Shares

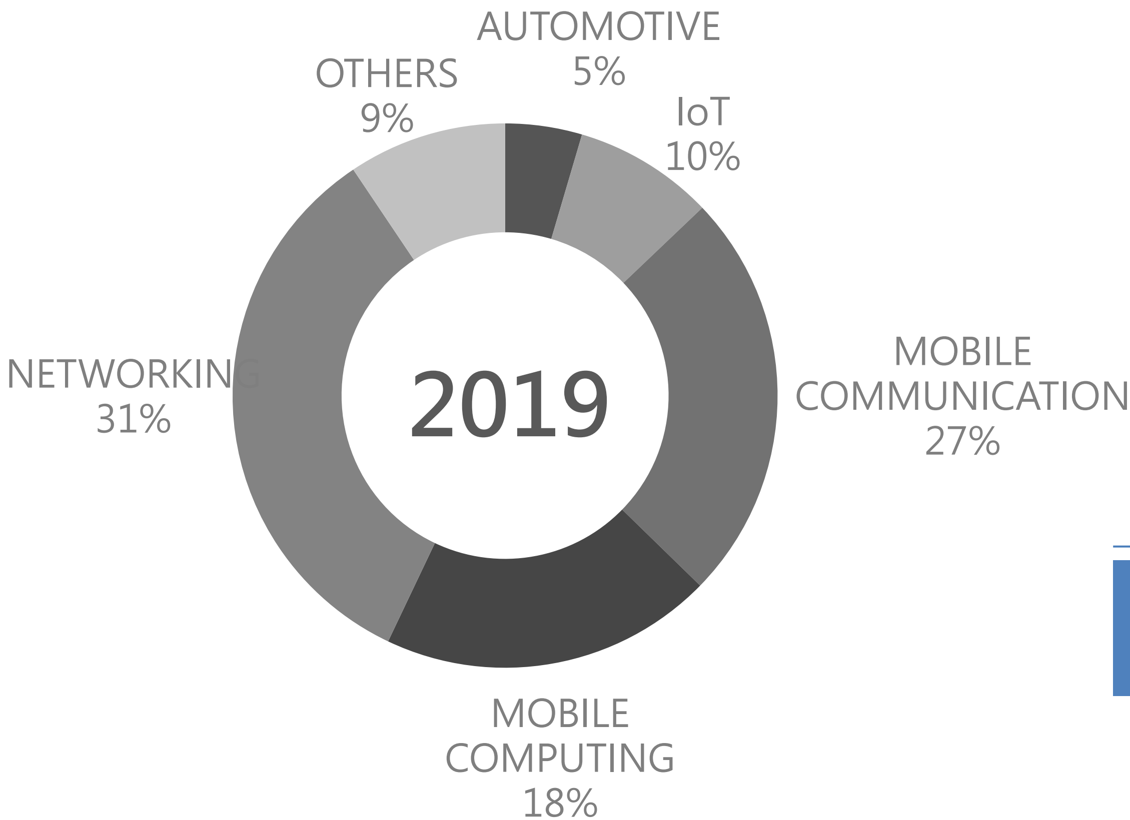
Strong Market Penetration

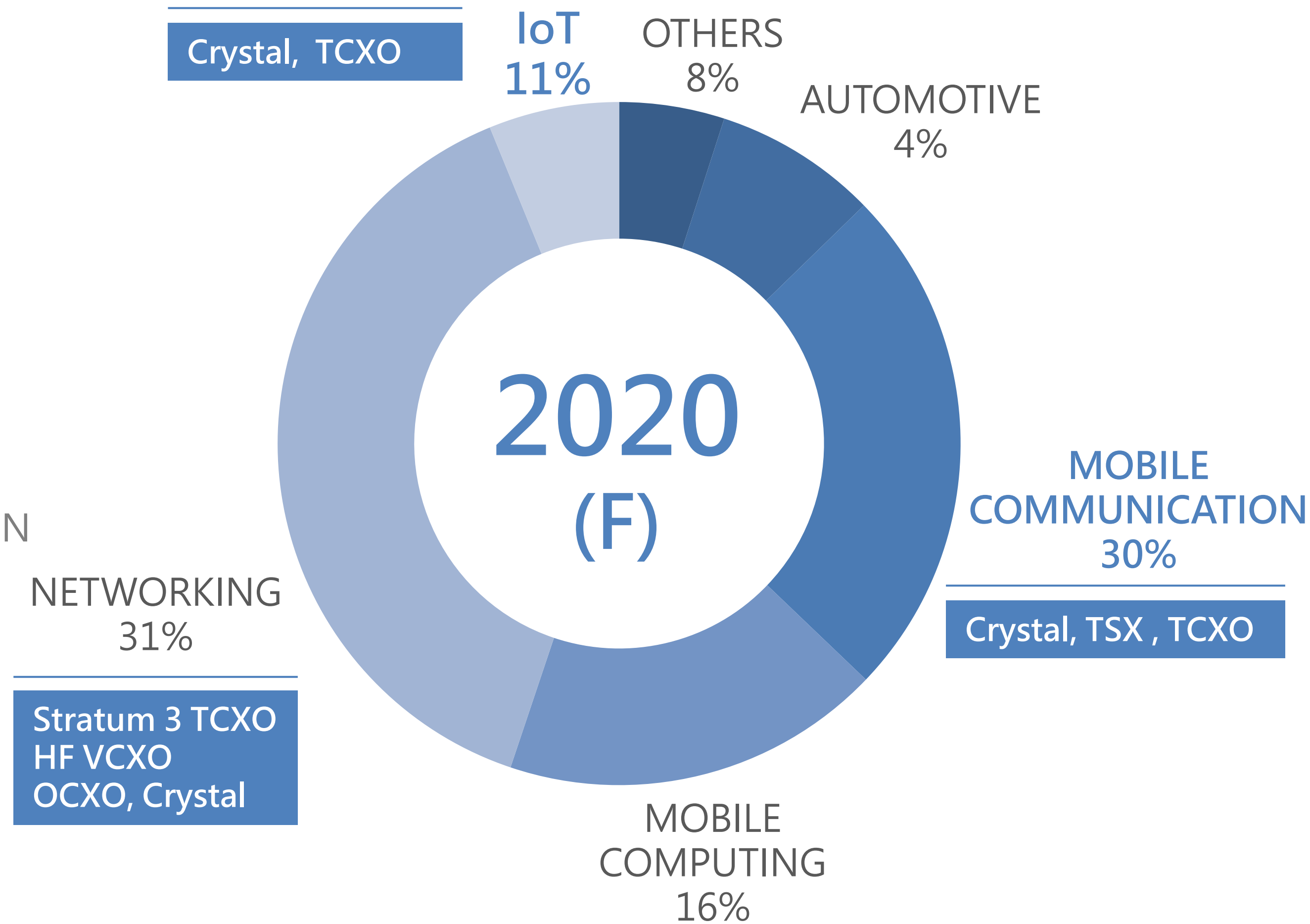
Source: CS&A 2020

			Revenue(M_USD)			Market Share(%)	
2018 Rank	2019 Rank	Company Name	2018	2019	Percent Change	2018	2019
1	1	Seiko Epson	$365	$355	-2.8%	11.7%	11.7%
2	2	NDK	$358	$336	-6.5%	11.5%	11.0%
4	3	TXC	$272	$281	3.2%	8.7%	9.2%
3	4	KCD	$285	$257	-10.9%	9.1%	8.5%
5	5	KDS	$191	$192	0.5%	6.1%	6.3%
6	6	Microchip (Vectron)	$176	$171	-2.9%	5.6%	5.6%
7	7	Murata	$94	$89	-5.6%	3.0%	2.9%
9	8	Harmony	$92	$88	-4.5%	2.9%	2.9%
8	9	Hosonic	$94	$86	-9.3%	3.0%	2.8%
11	10	SiTime	$85	$84	-1.2%	2.7%	2.8%
		Other Companies	**$1,110**	**$1,102**	**-0.7%**	**35.6%**	**36.2%**
		Total Revenue	**$3,122**	**$3,041**	**-2.7%**	**100.0%**	**100.0%**

TXC's Revenue by Market Segments

Actual and Forecast (F)

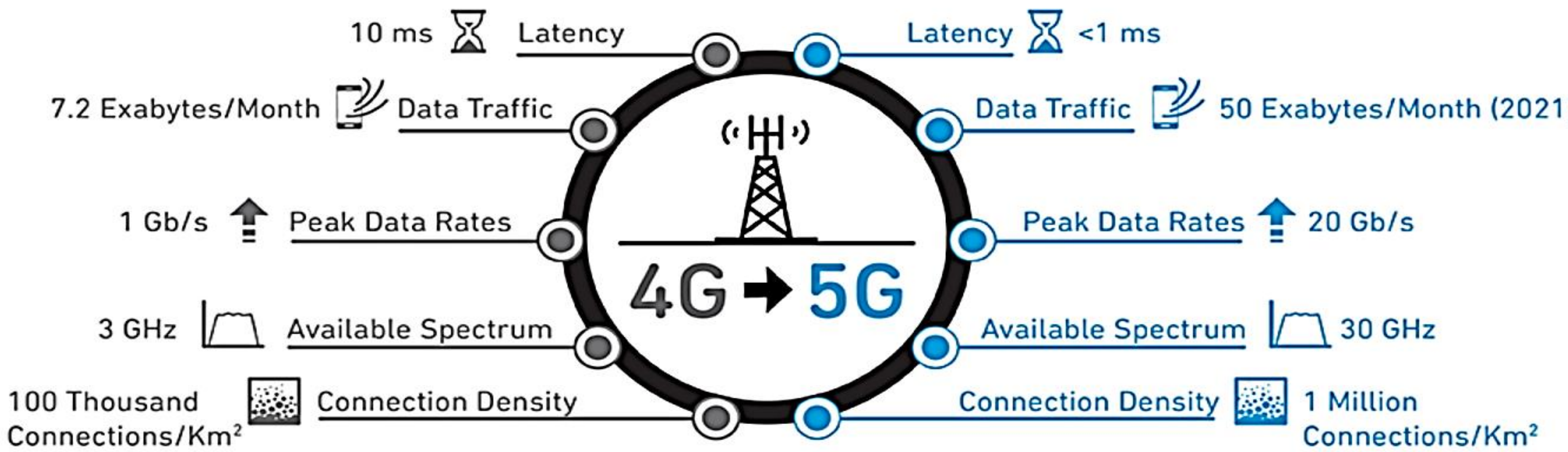




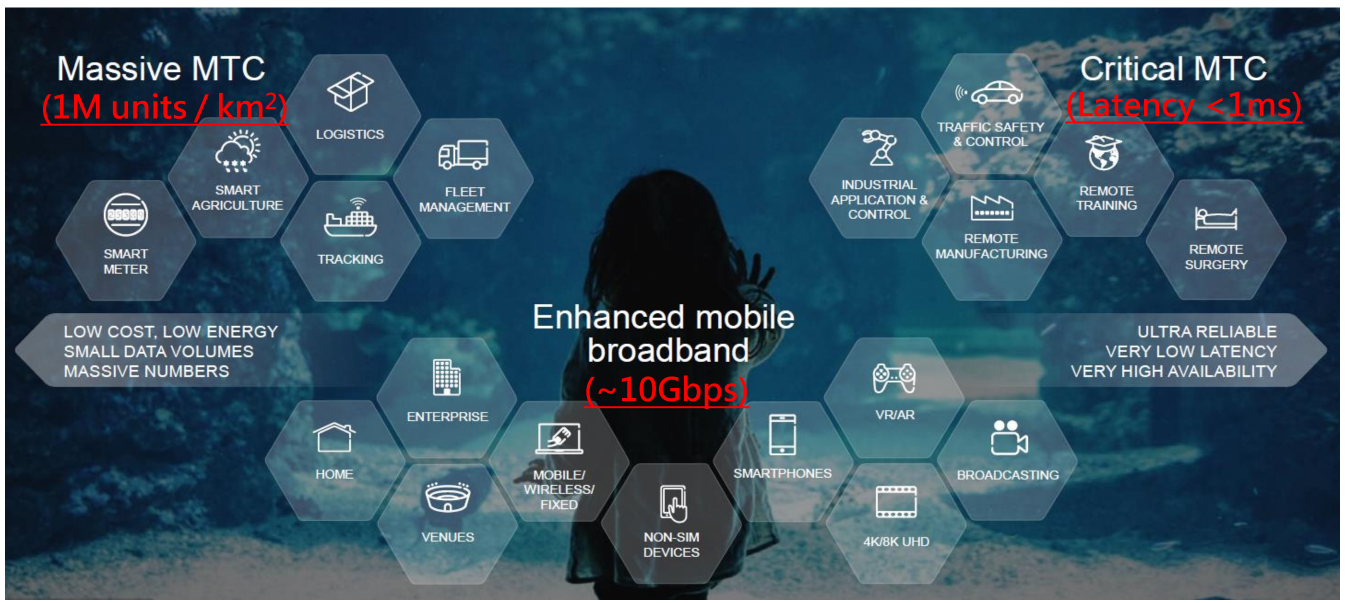
Growth Potential

- The development of new product lines

From 4G to 5G



QORVO, 2017



5G Use Cases – Drivers

- **eMBB (增强移動寬帶)**
  Enhanced Mobile Broadband
- **mMTC (大規模裝置互聯)**
  Massive Machine Type. Communications
- **uRLLC (超可靠低延遲)**
  Ultra-Reliable and Low Latency Communications

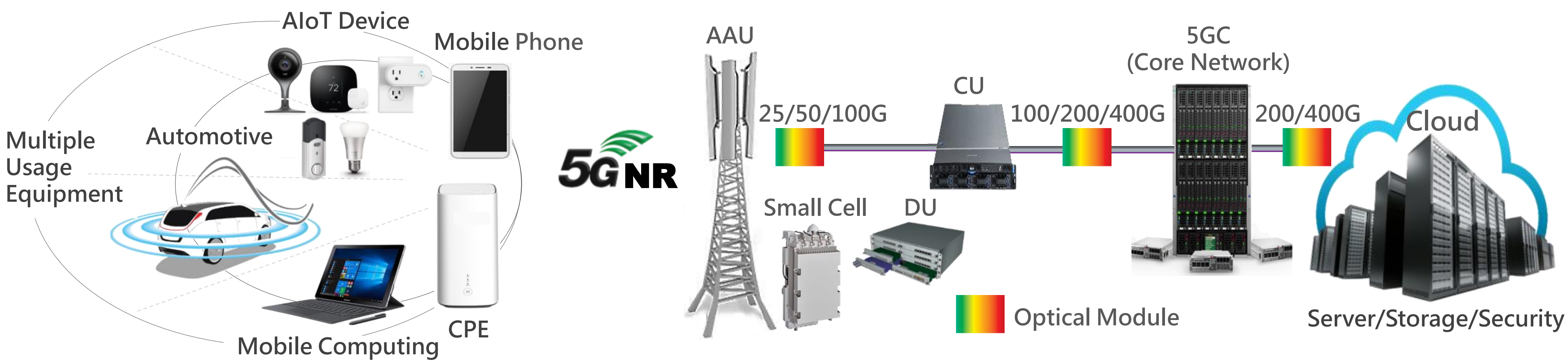
Ericsson, 2017 TPE 5G Summit

5G Complete Infrastructure & Device Ecosystem Development

Comprehensive Ecosystem

Network Infrastructure

Internet Data Center



TXC 5G Applications Product Trends

Device Interconnection	Infrastructure	Intelligence Platform
Mobile Phone (5G NR, GPS, Wi-Fi 6/6E, BT, NFC, etc.)	**Macro Base Station** (AAU, DU/CU, Transport & Core)	**Smart Device** (Home, City, Industry, Logistic, Medical, etc.)
Mobile Computing (NB, Tablet, Mobile Device, Server, etc.)	**Small Cell** (Micro, Pico, Femto, etc.)	**Edge Computing** (Server, CPU/GPU, MCU, etc.)
CPE (5G NR, Wi-Fi 6, NB-IoT, LoRA, etc.)	**Optical Module** (100/200/400G PAM4 & Coherent Solution)	**Automotive** (V2X & ADAS)

Support Roles in Timing Solution

- 5G NR • LTE • GPS • LoRA
- NB-IoT • Wi-Fi • BT • NFC

- Clock Synchronizer (SyncE & IEEE1588) • DSP
- Clock Generator • Jitter Attenuator • Ethernet

Crystal & Oscillator Specification Development Trend

- Miniature • Low Hysteresis
- High Frequency Accuracy & Stability
- High Temperature Operating

- Miniature
- Reliability
- Anti-Air Flow
- G-Sensitivity

- Ultra High Frequency Accuracy & Stability
- Ultra Low Phase Noise
- Ultra Low Jitter
- High Temperature Operating

Crystal & Oscillator Type Demand

- XTAL/HF XTAL
- TSX
- XO
- TCXO/S3TCXO

- XTAL/HF XTAL
- XO/Differential XO/VCXO
- TCXO/S3TCXO
- OCXO

5G to Drive Smart Phone shipments explosion

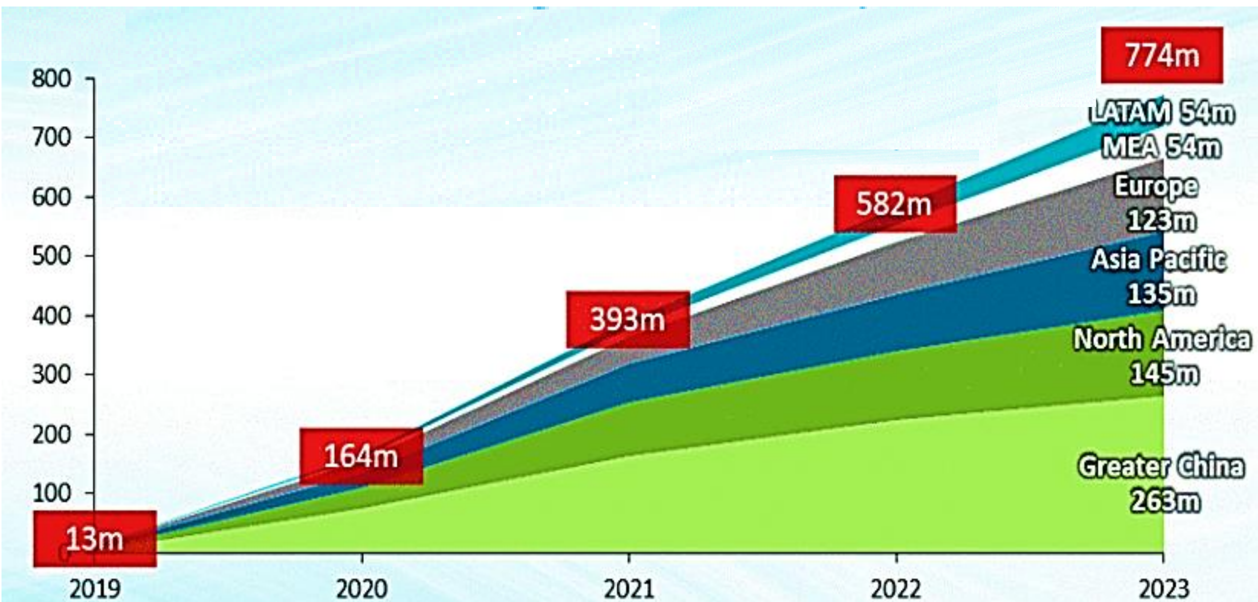
5G infrastructure deployment accelerates the 5G smart phone market.

China & USA expects to be over **50%** of Total Market TAM

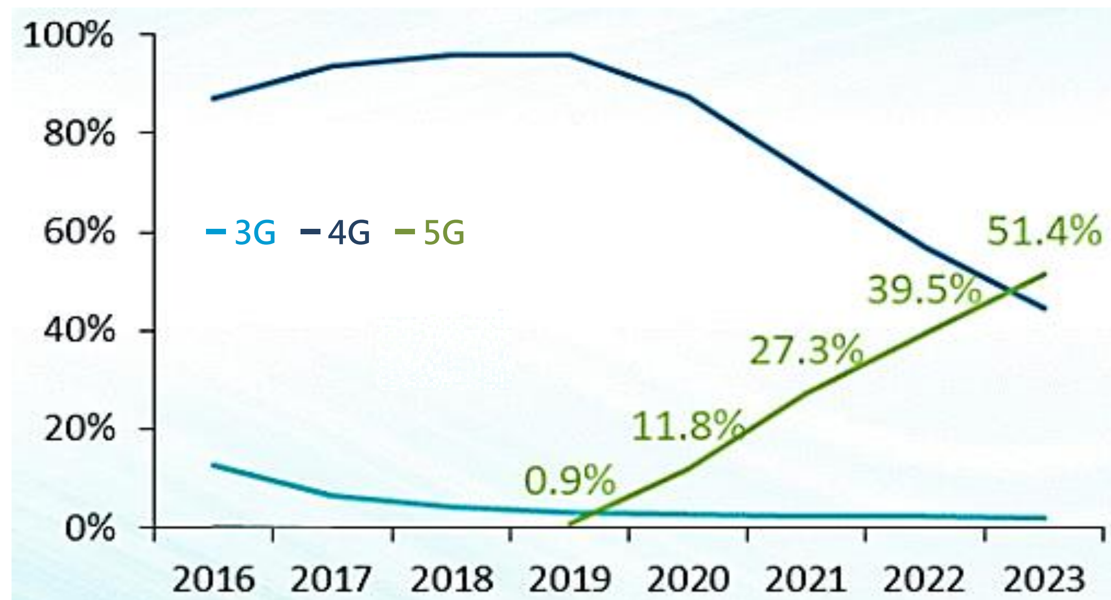
2019-2023 Estimate 5G Smart Phone
Total Volume: ~1.9billion
CAGR: ~180%

In 2023Y 5G Smart Phone estimates accounts for 51.4%
Which will surpass 4G Smart Phone shipments.

Million (sets)



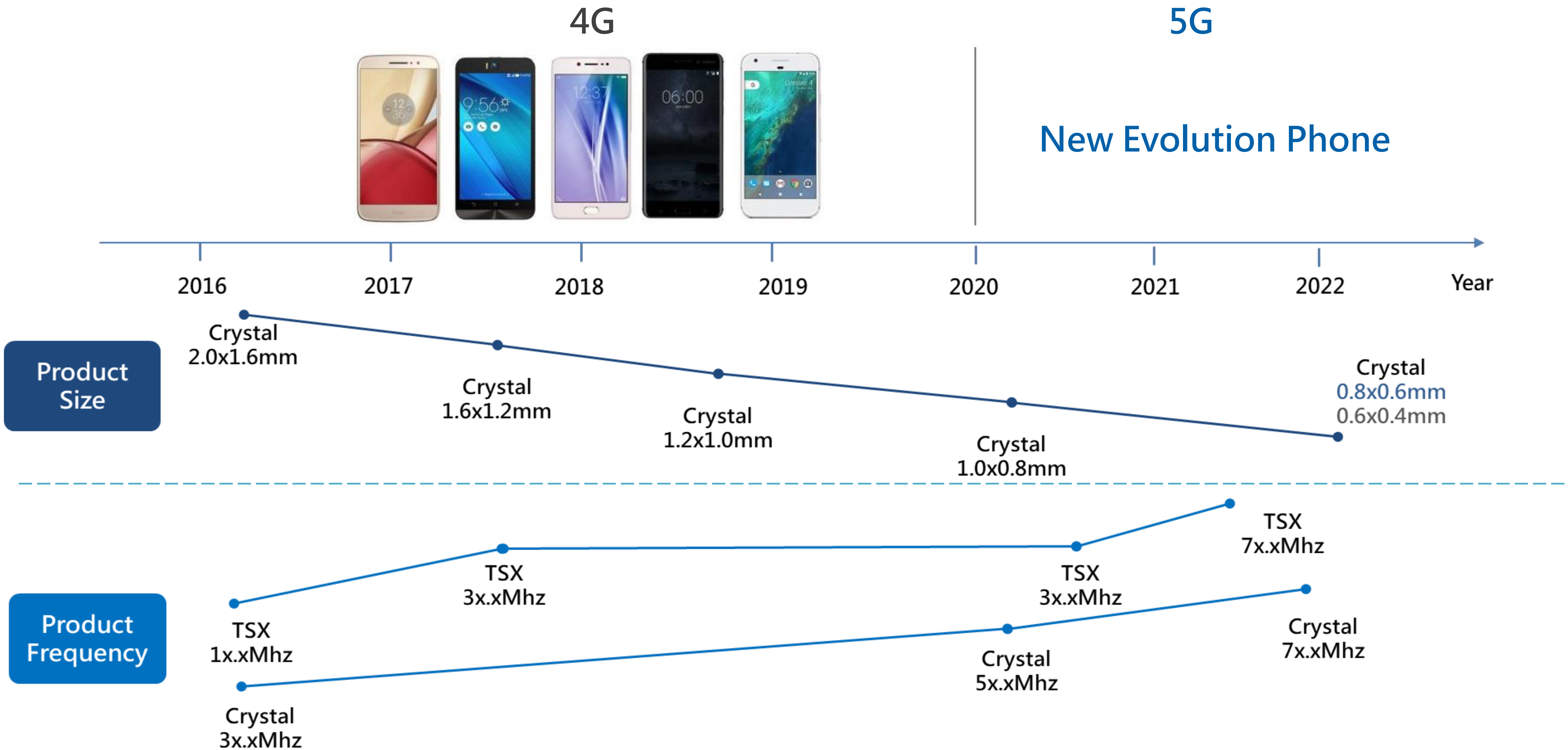
Global Smart Phone Forecast By Portion



Source: Canalys forecasts, smartphone, Analysis, July 2019

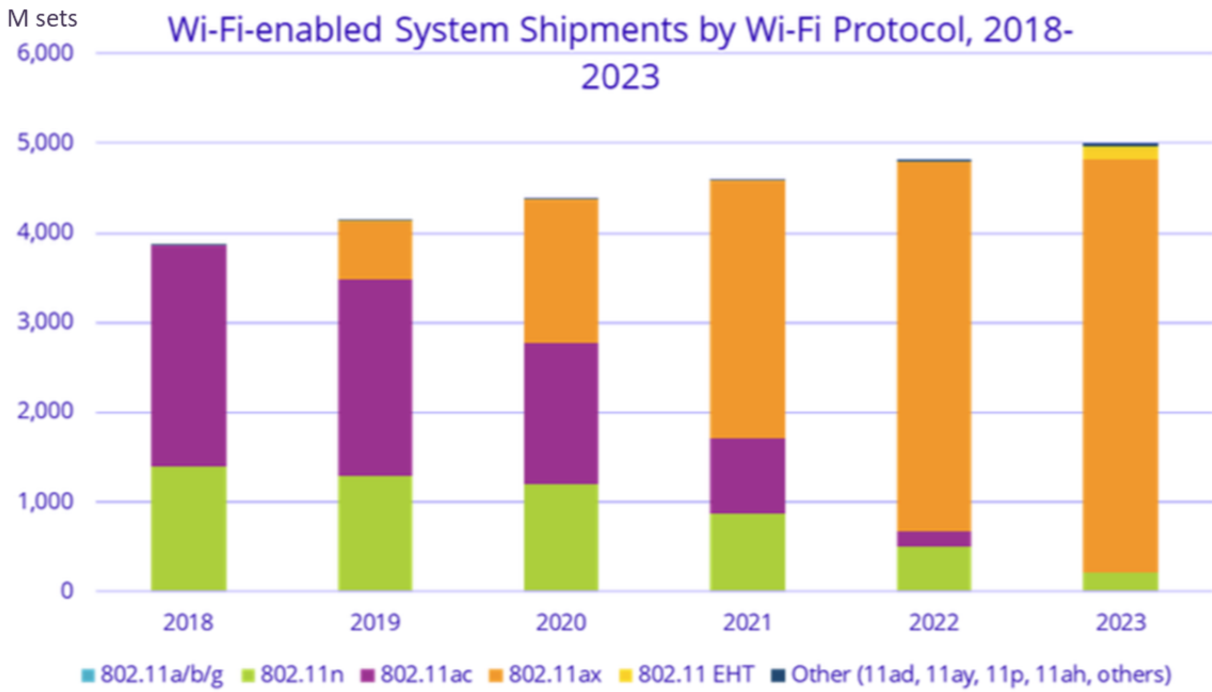
4G to 5G Smart Phone FCP Usage Overview

Miniature Size & Higher Frequency Product will be key growth driver to Smart Phone Market in the future, due to stricter space limitation for product design.

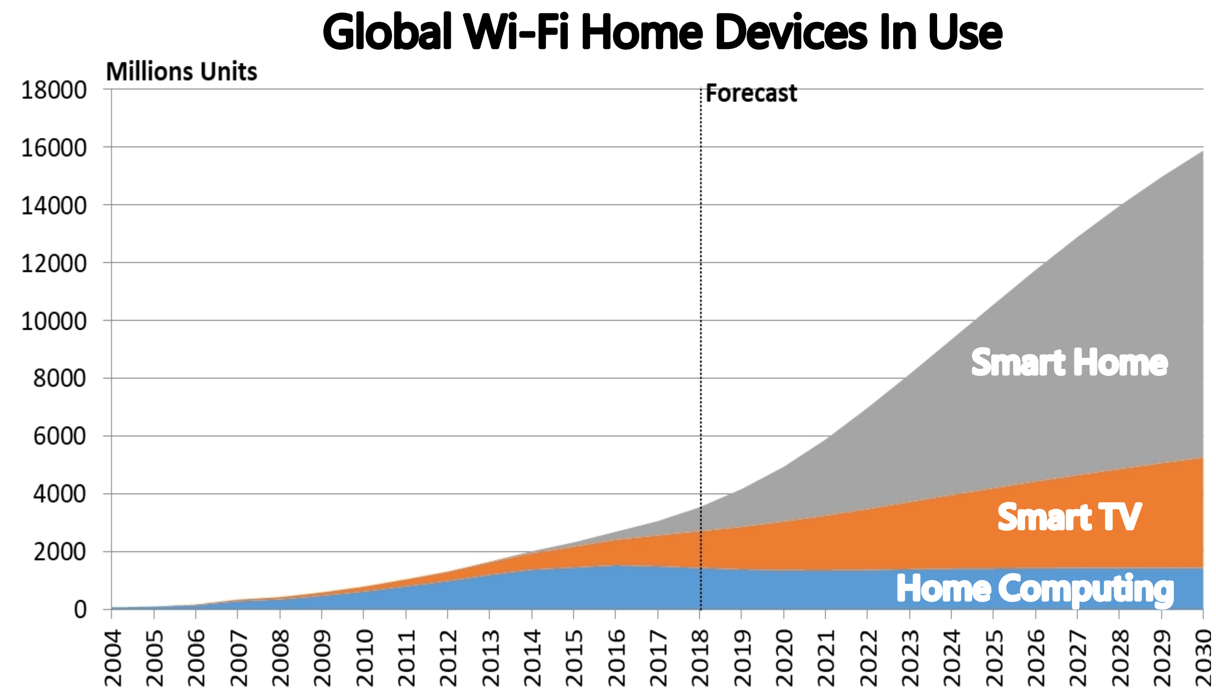


Wi-Fi 6 enables New Era of IoT Ecosystem

With adoption of Wi-Fi 6, it provides significant capacity, performance, and latency improvements to the entire Wi-Fi ecosystem.
CPE devices will booth the home connected devices
(Higher Frequency with Higher ASP)



Source: *Wi-Fi chipset shipment forecast by IDC towards 2023*



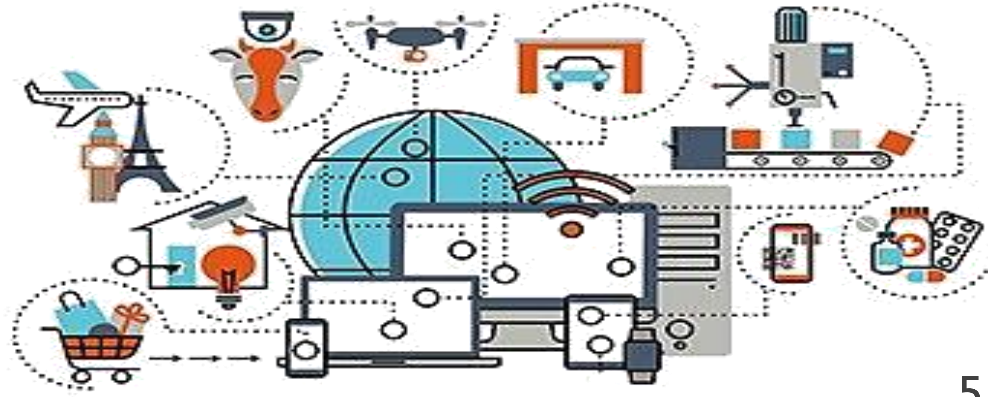
Source : Strategy Analytics' Intelligent Home Group

Comprehensive Devices Ecosystem Growth Engine

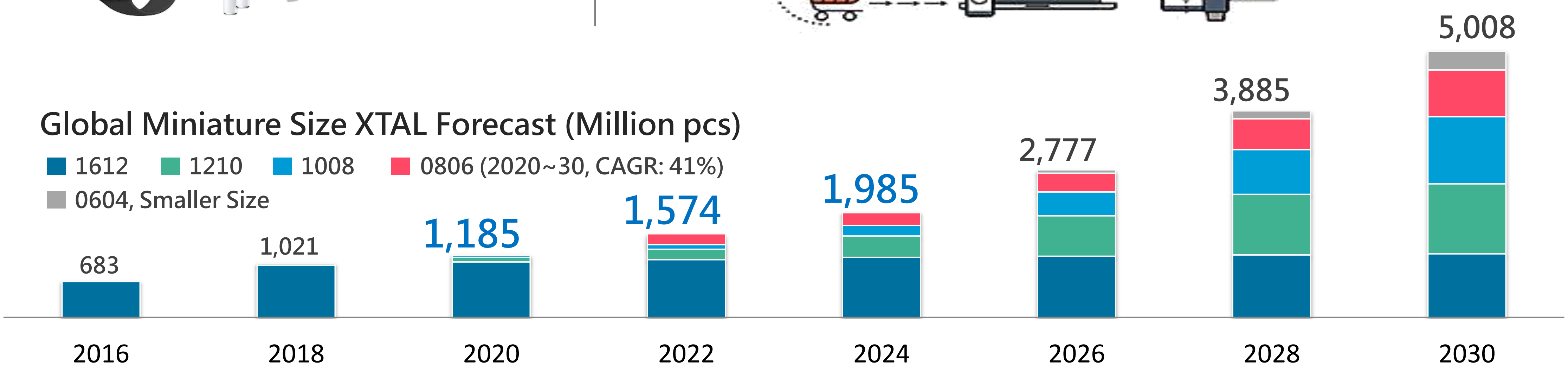
Rich Devices Ecosystem will require plenty of Miniature size XTAL to fit
in various kinds of application scenarios

4G Mobile Devices/Wearable/IoT

5G/6G AIoT Devices Ecosystem



Global Miniature Size XTAL Forecast (Million pcs)



Source: 1. CS&A, Combined WW SEMI-Timing Industry Report & Analysis, June 2019
2. Smart Phone Supplier Shipment & Forecast, 2016~2020

TXC Total Solutions for 5G Application

Solution	Size	Key Parameters	5G Main Application
OCXO	9775/1409	Stability, ±10 ppb	**Infrastructure** (AAU, DU/CU, Core, Optical)
S3TCXO	5032/7050	Stability, ±0.28 ppm	
TCXO	1612 – 2520	Phase Noise@100kHz, -166dBc/Hz	
VCXO	2520 – 7050	Phase Jitter@12k - 20MHz, 0.05 ps	**Intelligence Platform** (Smart Device, Edge Computing, Automotive)
Diff XO	2520 – 7050	Phase Jitter@12k - 20MHz, 0.05 ps	
PLL XO	2520 – 7050	Frequency, 10MHz - 2.1GHz	
XO	1612 – 2520	Phase Jiter@12k - 20MHz, 0.3 ps	**Device Interconnection** (Mobile Phone, Mobile, Computing, CPE)
TSX	1210 – 2520	Frequency, 19.2 – 76.8MHz	
Crystal	1008 – 5032	Frequency, 8 – 320MHz	

TXC Automotive Development Overview

Quality Assurance

Zero Risk Approach
(Lowest DPPM Target per Management System)

IATF 16949 Certified & VDA 6.3 Management
(HQ PCF, Taiwan & NGB, China)

Reliability
(AEC-Q100, AEC-Q200 & Other Specifies Compliant)

Product Robustness
(Design by Application, ASIL & Board Matching)

Application Focus

Infotainment & Telematics
(IVI System & Car Connectivity Related, Included V2X & UWB)

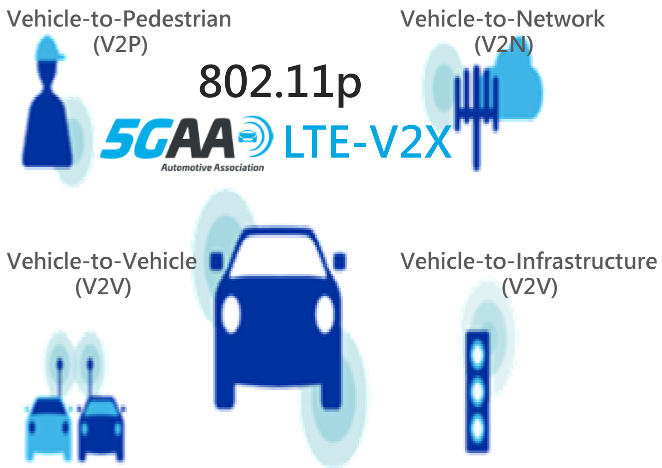
Security Electronic
(Interior/Door & Remote Control Units)

Advanced Driver Assistance (ADAS)
(Camera, Radar & System Integrated)

Safety Electronic (Included EV Related)
(BMS, OBC, Inverter, TPMS, ABS, ECU , Airbag & Power Steering)

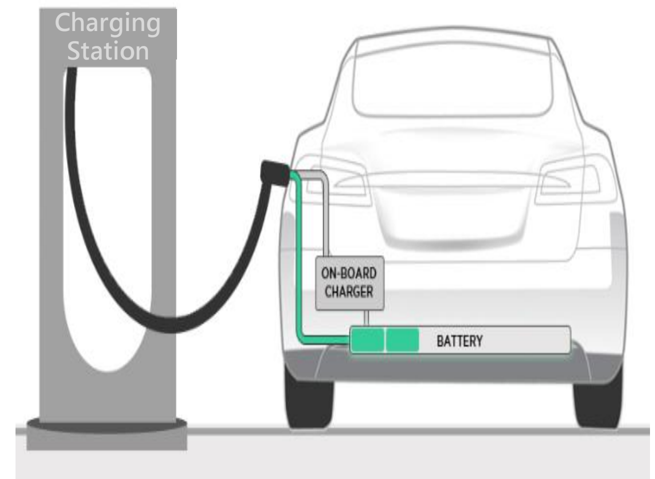
Automotive Key Application – Product Requirement

Vehicle to Anything



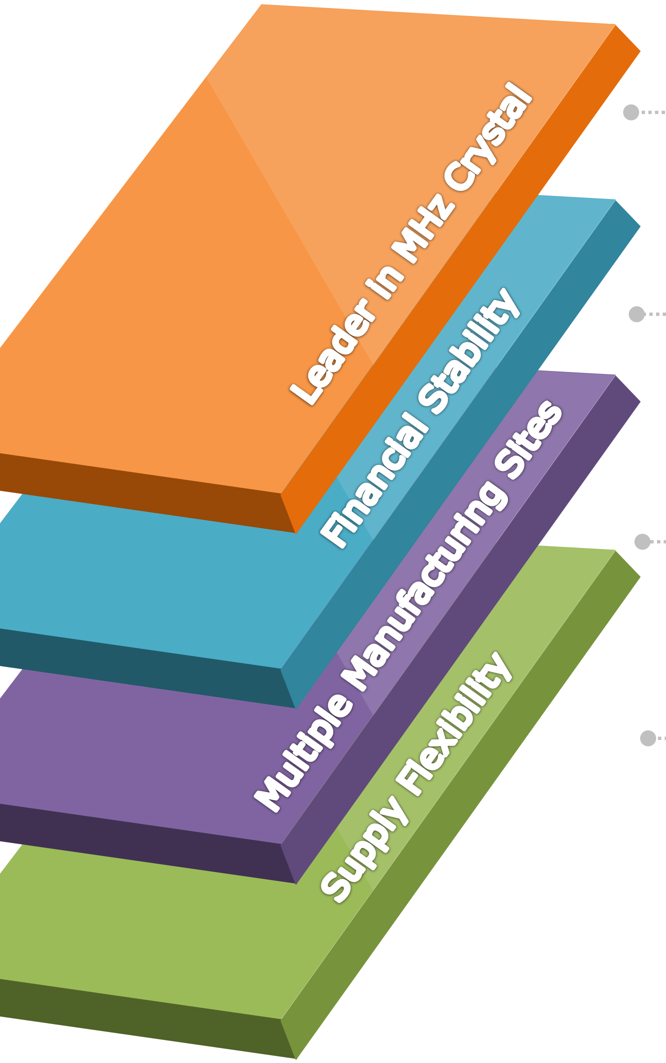
Advanced Driver Assisted System

Electric Vehicle



Reliability		
AEC-Q100 & AEC-Q200 + Custom Special Requirement		
Specification		
• TCXO	• Crystal & Oscillator	• Crystal & Oscillator
• G2, -40 to 105 °C	• G2/G1, -40 to 105/125 °C	• G1/G0, -40 to 125/150 °C
• Frequency Stability ±0.5 ppm	• Frequency Stability ±30/50 ppm (G2/G1)	• Frequency Stability ±50/150 ppm (G1/G0)
• Low Phase Noise	• Low EMI Solution (Oscillator)	• Low Frequency (4~12MHz) Support

TXC Competitive Advantages



No. 1 Largest Suppler in MHz Crystal for 7 Consecutive Years and Leading Edge Technology in Crystal Miniaturization.

Out of Top 5 Ranking Suppliers TXC is the only Profitable and Financially Healthy with Organic Growth without acquisitions.

TXC Manufactures MHz Crystal in all three manufacturing facilities to offset potential impacts caused by natural disasters. The expansion of miniaturization capacity by more than 20% in 2020.

Quick response and fulfillment to customer requirements

No. 1 **Largest Supplier in MHz Crystals**

TXC is Currently the No. 1 Largest Suppliers in the World for MHz Crystal alone.

No. 1 **Largest Supplier Outside Japan**

TXC is Currently No. 1 Largest Supplier in Frequency Control Products outside of Japan and introduced healthy competition into the Frequency market.

5G SOLUTIONS

Advanced for Synchronizer | Generator | Attenuator

No.4, Kung Yeh 6th Rd., Ping Cheng Industrial District Ping Cheng District 32459,
Tao Yuan City, Taiwan
TEL: +886-3-4698121 FAX: +886-3-4696954
www.txccorp.com