



# Investor Conference

October 2017

# 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.

# Financial Performance

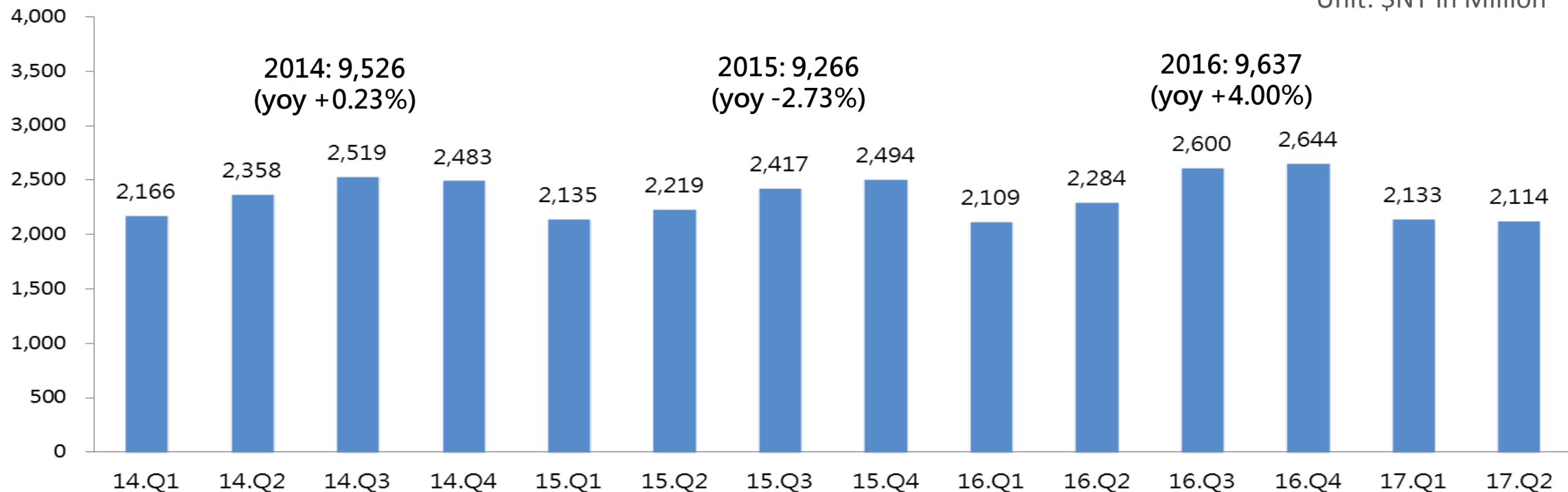
P&L, EPS, DPS, CAPEX

# Quarterly Performance

## Stable Growth

Benefited from various of markets penetration

Unit: \$NT in Million



	14.Q1	14.Q2	14.Q3	14.Q4	15.Q1	15.Q2	15.Q3	15.Q4	16.Q1	16.Q2	16.Q3	16.Q4	17.Q1	17.Q2
Revenue (QoQ)	-9.8%	8.9%	6.8%	-1.4%	-14.0%	4.0%	8.9%	3.2%	-15.4%	8.3%	13.9%	1.7%	-19.3%	-0.9%
Revenue (YoY)	-6.9%	1.2%	3.0%	3.5%	-1.4%	-5.9%	-4.1%	0.5%	-1.2%	2.9%	7.6%	6.0%	1.1%	-7.5%

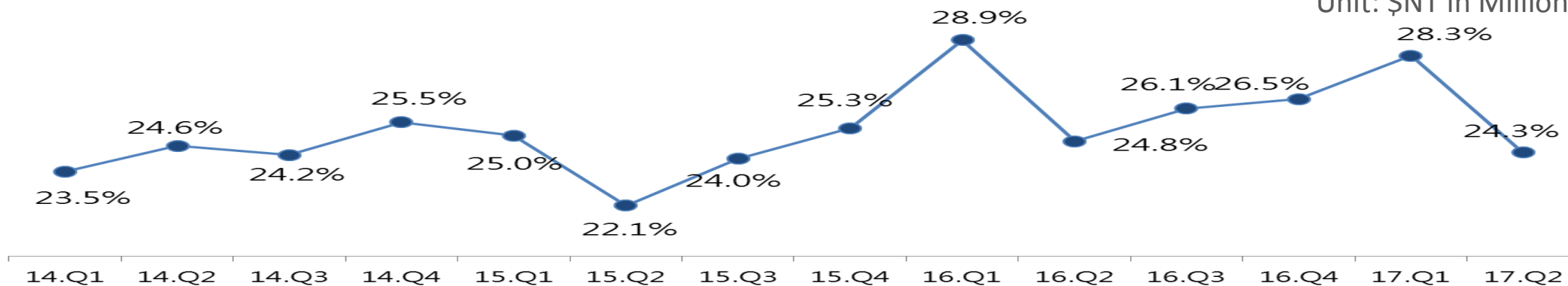
# Quarterly Performance

## Gain in Gross Profit

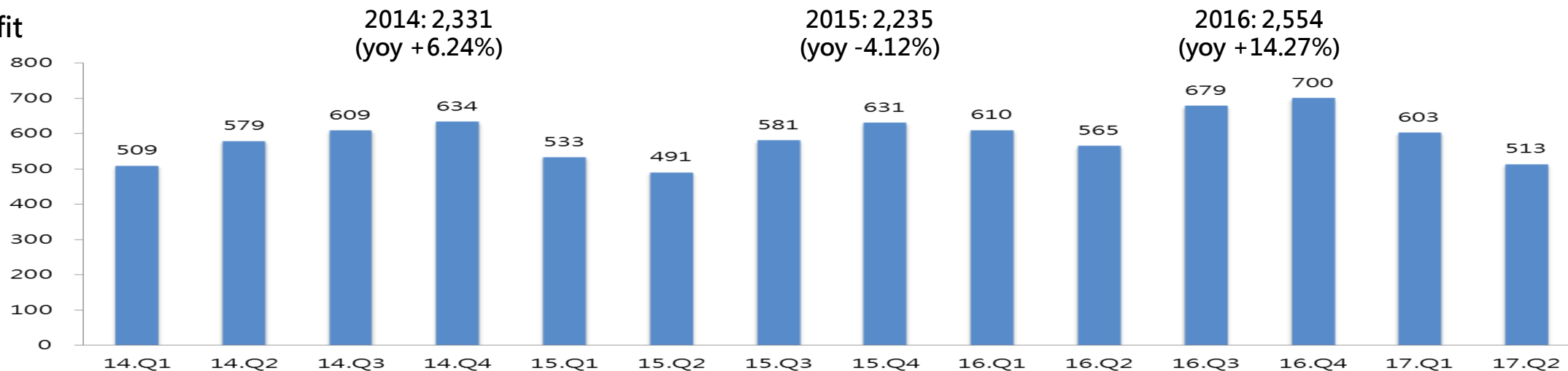
Contributed by new products, new customers and product mix strategy

Unit: \$NT in Million

Gross Margin(%)



Gross Profit



	14.Q1	14.Q2	14.Q3	14.Q4	15.Q1	15.Q2	15.Q3	15.Q4	16.Q1	16.Q2	16.Q3	16.Q4	17.Q1	17.Q2
Gross Profit (QoQ)	-7.3%	13.8%	5.2%	4.1%	-15.9%	-8.0%	18.4%	8.6%	-3.3%	-7.3%	20.0%	3.2%	-13.9%	-14.9%
Gross Profit (YoY)	-2.5%	2.3%	9.3%	15.5%	4.8%	-15.3%	-4.6%	-0.5%	14.4%	15.2%	16.8%	11.0%	-1.1%	-9.2%



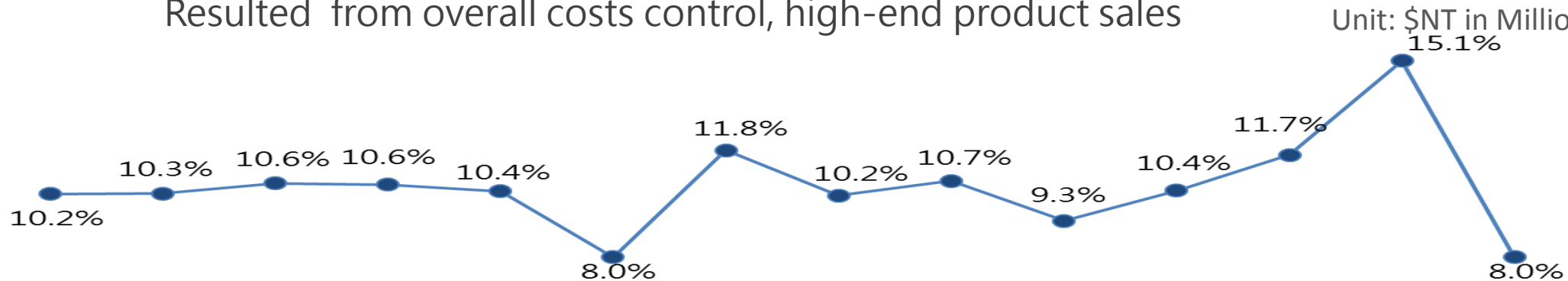
# Quarterly Performance

## Gain in Net Profit

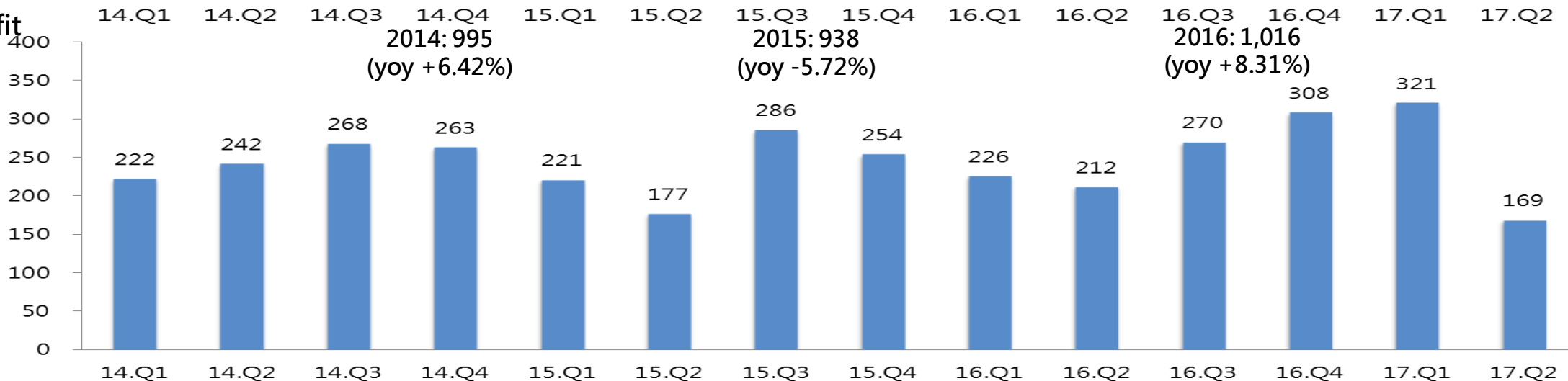
Resulted from overall costs control, high-end product sales

Unit: \$NT in Million

Net Margin%



Net Profit



	14.Q1	14.Q2	14.Q3	14.Q4	15.Q1	15.Q2	15.Q3	15.Q4	16.Q1	16.Q2	16.Q3	16.Q4	17.Q1	17.Q2
Net Profit (QoQ)	-8.3%	9.0%	10.7%	-1.9%	-15.9%	-19.9%	61.5%	-11.0%	-11.1%	-6.3%	27.3%	14.3%	4.1%	-47.5%
Net Profit (YoY)	6.2%	10.0%	1.5%	8.7%	-0.4%	-26.9%	6.7%	-3.3%	2.3%	19.7%	-5.6%	21.3%	42.0%	-20.5%

# Income Statement Summary

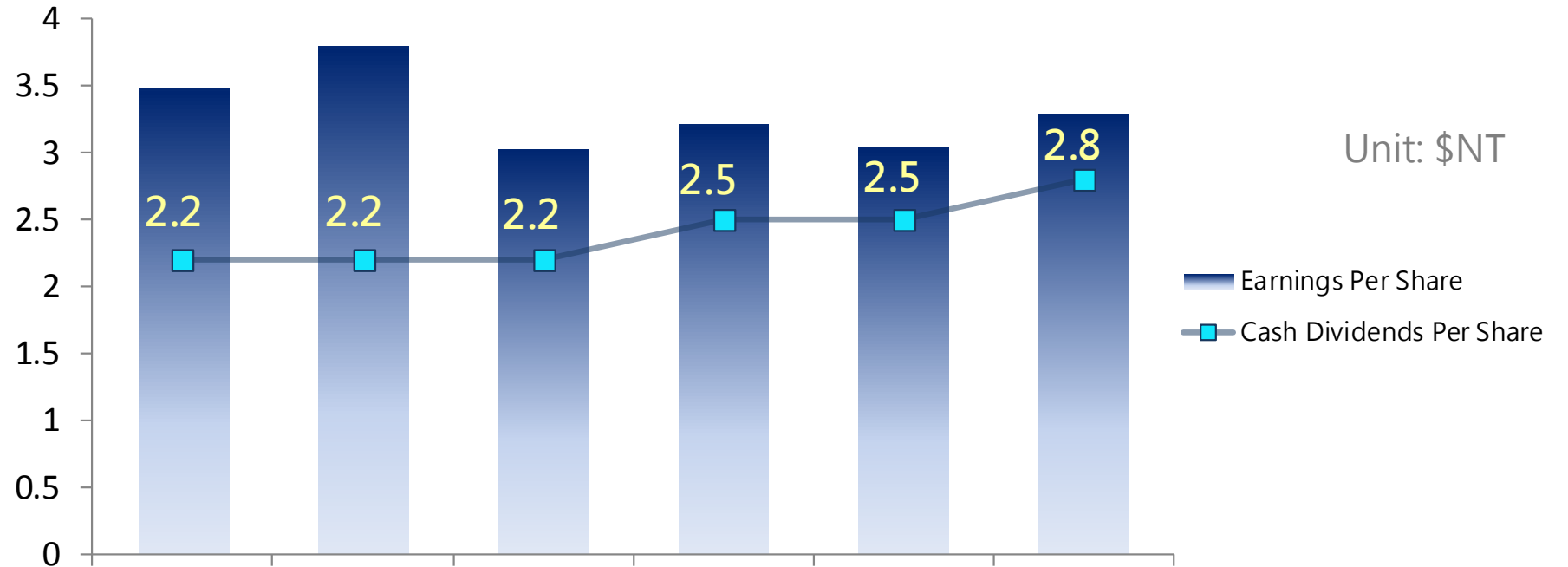
Unit : \$NT in thousand	2015	2016	YoY	1H 2016	1H 2017	Growth%
Net Revenue	9,265,656	9,637,101	4.0%	4,392,894	4,246,502	-3.3%
Gross Profit	2,235,175	2,554,069	14.3%	1,175,287	1,116,338	-5.0%
Operating Profit	908,335	1,114,394	22.7%	502,956	422,830	-15.9%
Income before tax	1,087,610	1,192,272	9.6%	512,406	568,621	11.0%
Net Income	938,203	1,016,164	8.3%	438,085	489,653	11.8%
<hr/>						
Gross Margin(%)	24.1%	26.5%	-	26.8%	26.3%	-
Operating Margin(%)	9.8%	11.6%	-	11.4%	10.0%	-
Net Margin(%)	10.1%	10.5%	-	10.0%	11.5%	-

# Balance Sheet Summary

Unit : \$NT in thousand	Q2 2016	2016	Q2 2017
Current Assets	8,385,690	8,818,130	8,043,161
Fixed Assets	4,221,080	4,277,905	4,390,707
Total Assets	14,559,277	14,841,968	13,662,819
Current Liabilities	2,920,430	3,156,105	3,387,900
Long-term Liabilities	1,868,236	1,912,681	1,543,659
Total Liabilities	4,788,666	5,068,786	4,931,559
Shareholders' Equity	9,770,611	9,773,182	8,731,260
Debt Ratio(%)	32.9%	34.2%	36.1%
Current Ratio(%)	287.1%	279.4%	237.4%
Quick Ratio(%)	226.9%	227.5%	183.1%
Book Value Per Share(\$NT)	31.36	31.38	28.04

# EPS and DPS

## Stable Profit Growth and High Payout Ratio

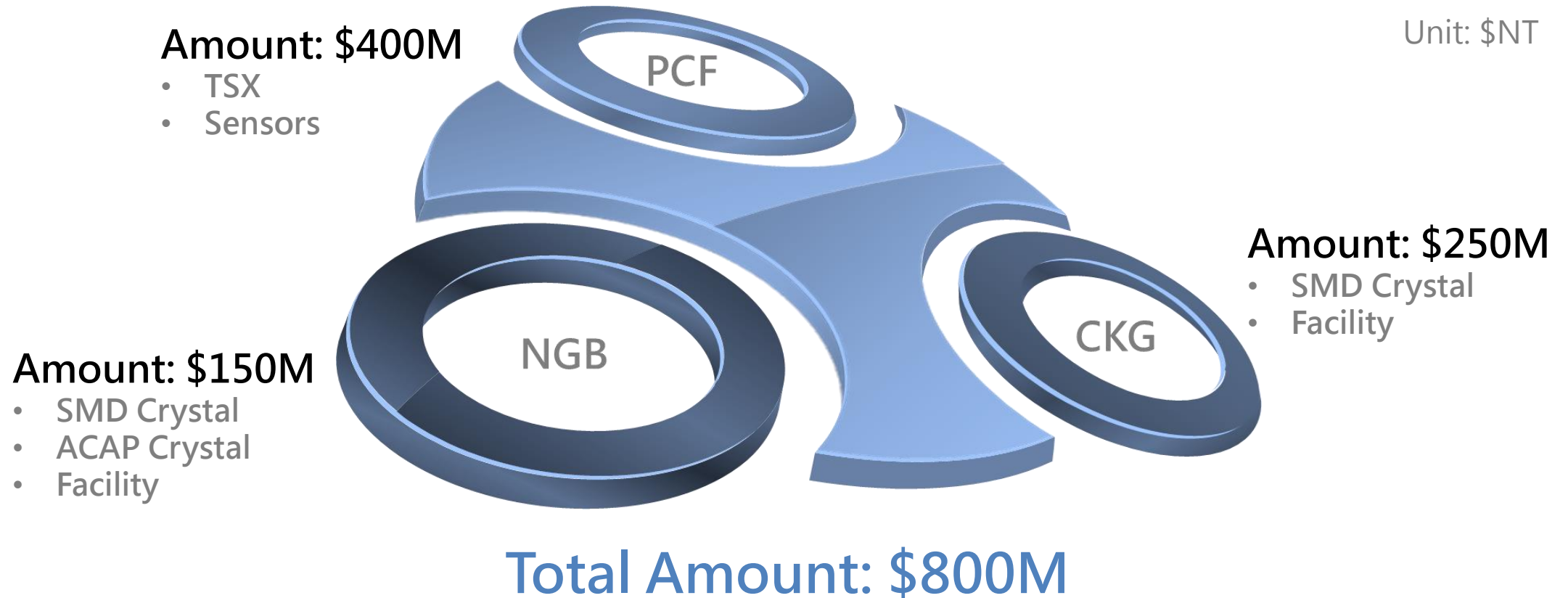


	2011	2012	2013	2014	2015	2016
Earnings Per Share	3.48	3.79	3.02	3.21	3.03	3.28
Cash Dividends Per Share	2.2	2.2	2.2	2.5	2.5	2.8
Stock Price (Apr. end)	43.55	46	43.55	39.9	41.1	44.5
Payout Ratio(%)	63.22	58.05	72.84	77.88	82.51	85.37
Yields(%)	5.05	4.78	5.05	6.27	6.08	6.29

# Capital Expenditure

## Expand the Economy of Scale

Capacity expansion for new products, and to satisfy market demands



# Roads to New Growth

Trend, Opportunity, Growth

# To Lock and Unlock



They are capable of these...

Sense > Connect > Communication > Analytics > Actions > Value

They built-in these...

Sensors  
(TXC)

Timing  
(TXC)

Technology (Wireless)  
4G/5G  
BT, WiFi, etc

A.I.  
Clouds  
Software/Apps

Lock/ Unlock  
(TSE Solenoid)

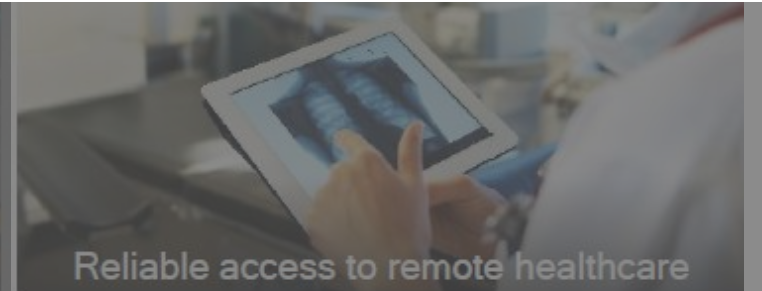
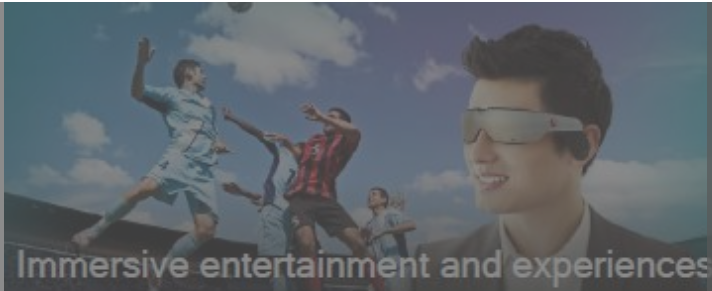
Real time, Security, etc.

(August)

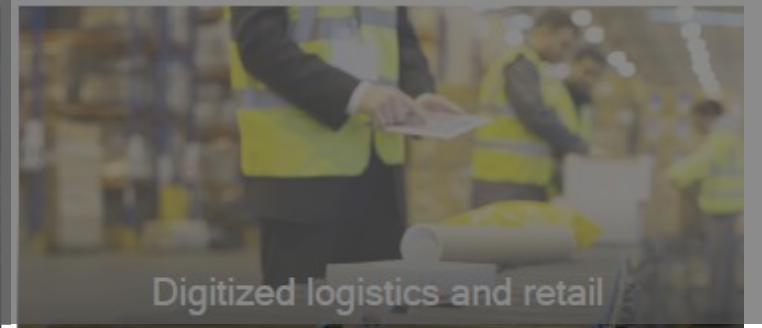
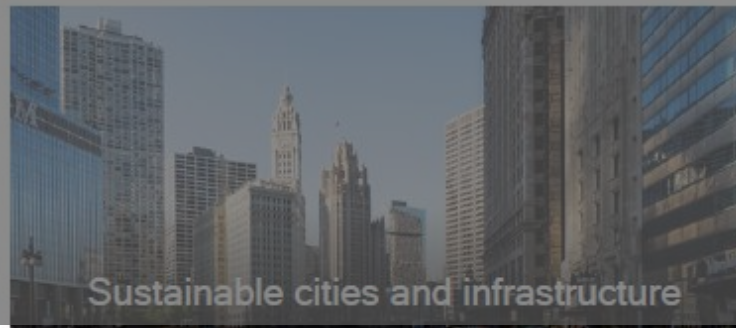
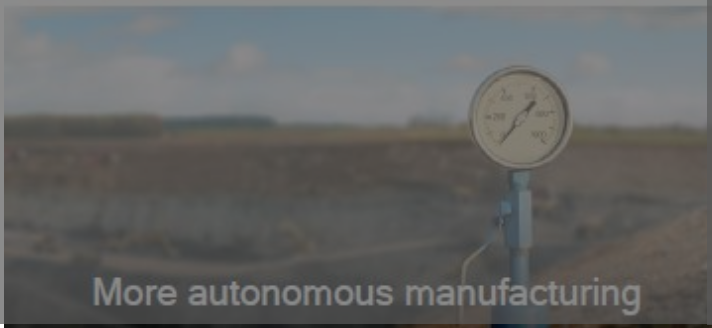
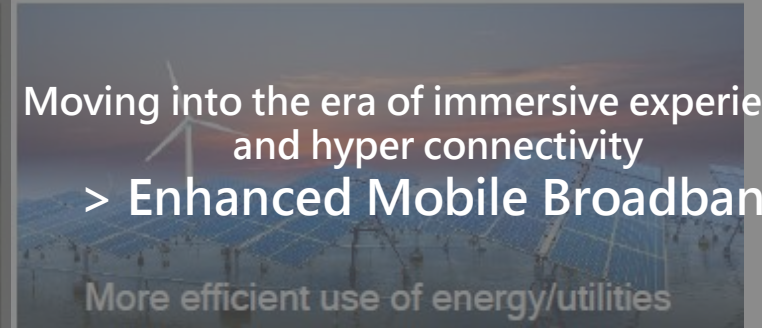
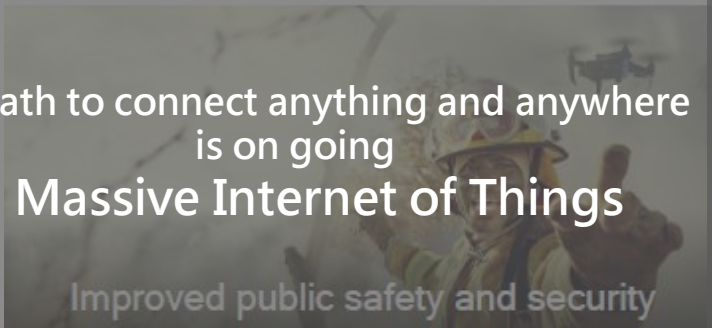
# Trend

## Digital is already here, and becoming Intelligent

All things can sense, all things are connected, and all things are intelligent



The path to connect anything and anywhere is on going  
> **Massive Internet of Things**



(Qualcomm)

# Digital and Intelligent

## Data is growing every second, AI is taking place

Changing the way we do things, machines do things

Mobile data will grow 18-fold in 5 years  
(Cisco)

Data Storage will grow to 1.8 Zettabyte (1000<sup>7</sup>)  
By 2020, CAGR 40%  
(Cisco)

Big Data volumes will reach 247 Exabyte (1000<sup>6</sup>) by 2020, CAGR 58%  
(Cisco)

6.4M Apps available as of today, CAGR 40%  
(Statista)

30B connected devices by 2020  
(IDC)



Mobility



Cloud



Big Data



Apps



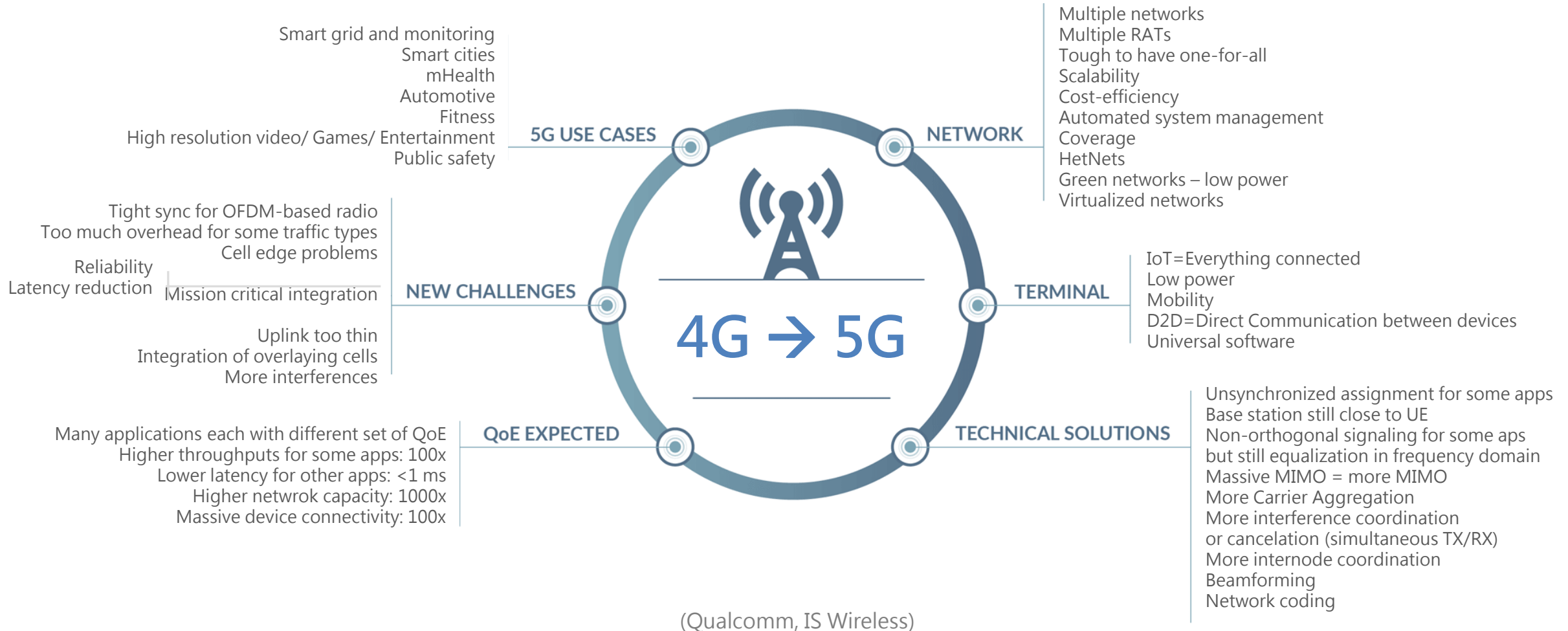
Internet of Things

## Intelligent Networks

# High Data Rate, High Traffic

## Accelerate the path to 5G

Market is scalable to an extreme variation of requirements

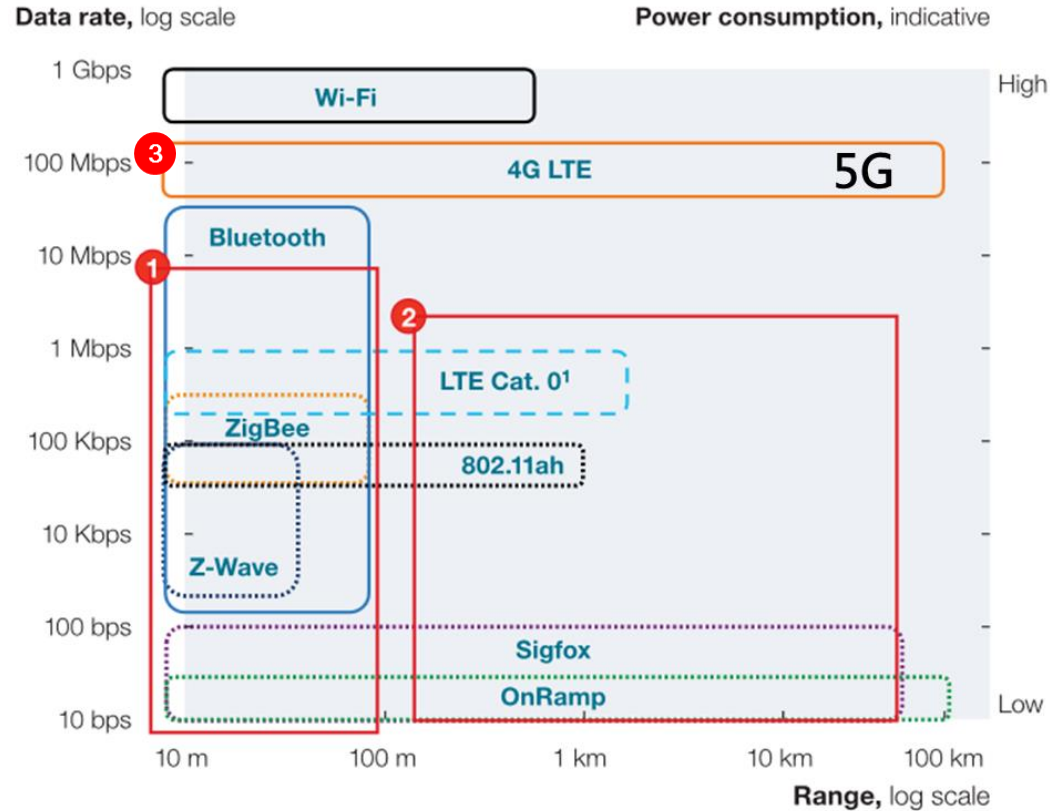


# 4G, 5G and other Wireless

## Will co-exists

Various of standards to meet different application needs

- 1 Low range, medium-low data rate  
Standards competing in IoT applications
- 2 High range, low data rate  
Common standards for Smart grids



- 3 High range, high data rates  
Standards for mobile connectivity, audio and video stream

(IS Wireless)

# Opportunity

## Everything Connected, Everything Sense

Create endless possibilities



Mobile



Video Security



Wearables



Object Tracking



Utility Metering



Environmental Monitoring

Drive the Timing and Sensing growth

VS.

Time for market adoption, change, regulation, etc.



Connected Car



Energy Management



Connected Healthcare



Smart Cities

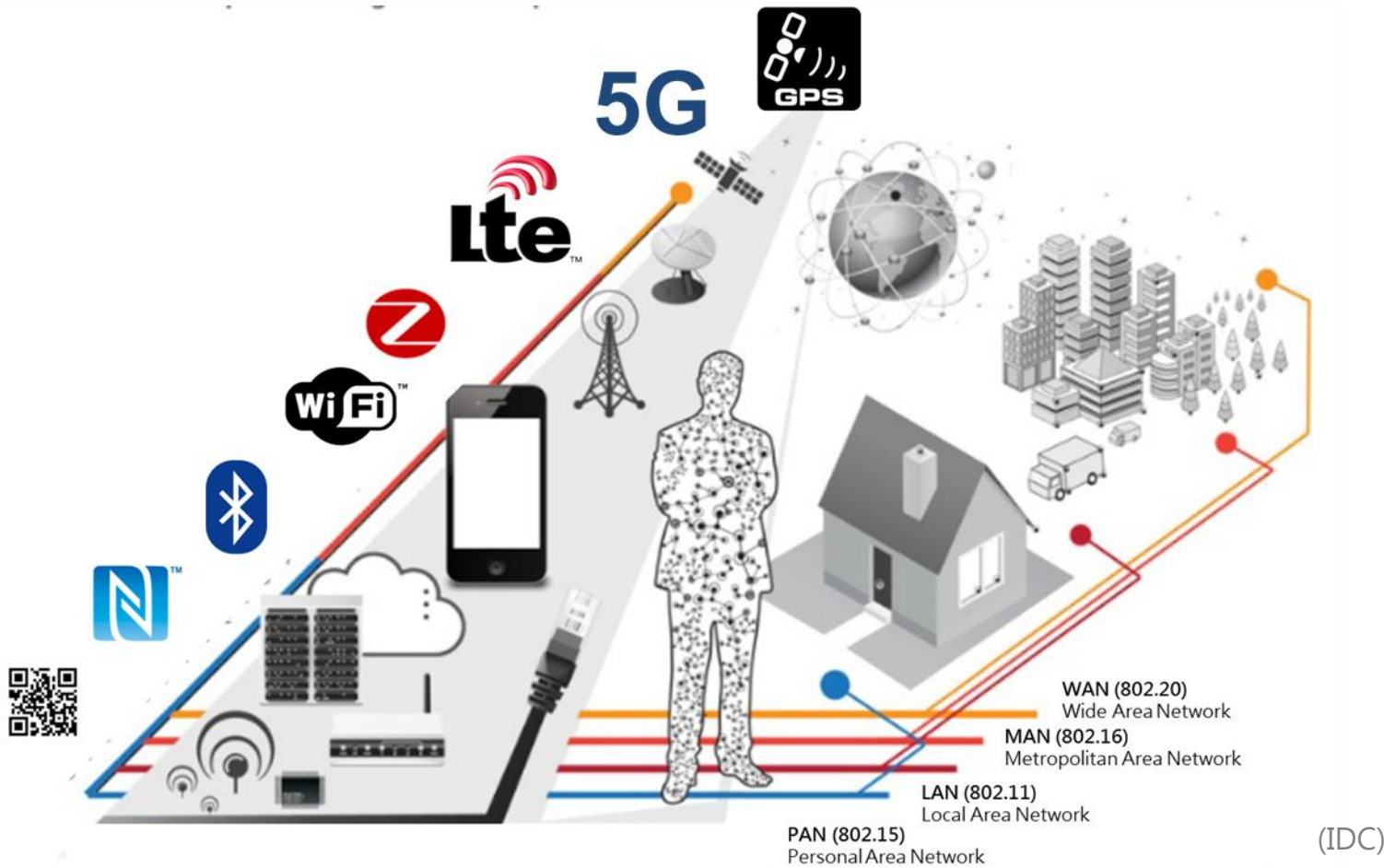


Smart Buildings

(Qualcomm)

# Everything Connected

## Connectivity needs Timing (Crystal & Oscillator)



### TXC #3 in Global Timing Market

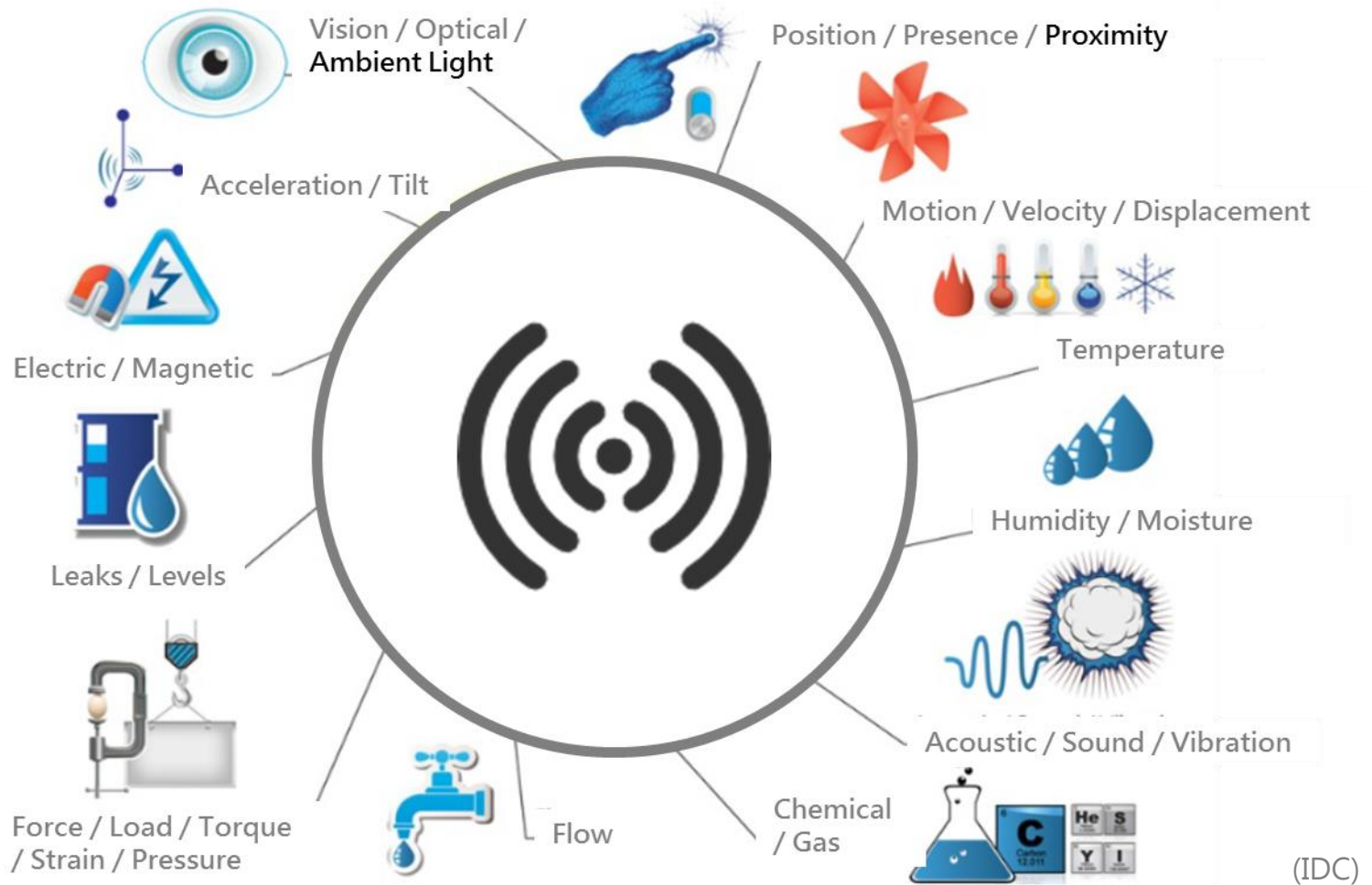
- Total Timing solutions provider
- Market leader in product miniaturization and integration

### Coming in 2017

- Miniature Crystals & Oscillators
- Wide Temperature Range Crystals & Oscillators
- High Frequency & Ultra Stability Oscillators

# Everything Sense

## Sensing needs Sensors



**TXC #1 to launch**  
**Smallest & High Performance**  
**Ambient Light + Proximity**  
**Sensor in 2.5x2.0mm ceramic**  
**package**

**Coming in 2017**

- Color + Proximity Sensor
- PM2.5 Sensor Module

(IDC)

# Market Forecast

## Timing and Sensing are forecasted at stable growth

### Global Timing Market

Estimated to reach US\$3.8 billion by 2020

CAGR 4.2% (2015~2020)

TXC YoY 4%  
(NT\$)

Forecasted 28 billion units by 2020

CAGR 8.5% (2015~2020)

TXC YoY (12%)

Source: CS&A, TXC

#### Cons:

MCU and AP integration will reduce the use of timing

#### Pros:

Everything connected is driving the timing growth

### Global Light Sensor (Ambient, Color, Proximity) Market in Smartphone, NB, Tablets, Wearables

Estimated to reach US\$ 2.14 billion by 2022

CAGR 9.3% (2016 and 2022)

TXC great  
opportunity to  
grow

Forecasted 6 billion units by 2022

CAGR 18% (2016~2022)

Source: IHS, Yole, TXC

#### Cons:

Sensors integration will reduce the use of standalone sensor

#### Pros:

Everything sense is driving the sensors growth

# Market Leader

## TXC #3 in Global, #1 in China

2015 Rank	2016 Rank	Company Name	Revenue (M)			Market Share (%)	
			2015	2016	Percent Change	2015	2016
1	1	Seiko Epson	\$427	\$409	-4.2%	13.8%	12.9%
2	2	NDK	\$338	\$357	5.4%	10.9%	11.3%
3	3	TXC	\$302	\$310	2.8%	9.7%	9.8%
4	4	KCD	\$301	\$287	-4.5%	9.7%	9.1%
5	5	KDS	\$201	\$212	5.5%	6.5%	6.7%
6	6	Vectron	\$163	\$160	-2.0%	5.3%	5.1%
7	7	SIWARD	\$95	\$103	8.8%	3.1%	3.3%
8	8	Hosonic	\$91	\$94	2.8%	2.9%	3.0%
N/A	9	MegaChips	\$35	\$73	108.6%	1.1%	2.3%
10	10	Murata	\$69	\$72	5.0%	2.2%	2.3%
		Others	\$1,080	\$1,088	0.7%	34.8%	34.2%
		<b>Total Revenue</b>	<b>\$3,102</b>	<b>\$3,165</b>	<b>2.0%</b>		

(CS&A)

TXC started to gain Ambient Light Sensors market share, shipped over 120M units to Tier 1 Smartphones

Top 4 Suppliers for high-end smartphone  
 AMS (TAOS, Heptagon)  
 Broadcom (Avago)  
 ROHM  
 TXC

TXC great opportunity to grow

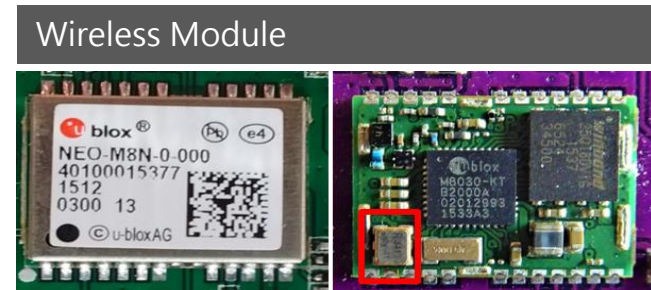
# New Growth

## Everything Connected and Sense

Key growth products (Miniature, High Stability, Wide Temperature Range)

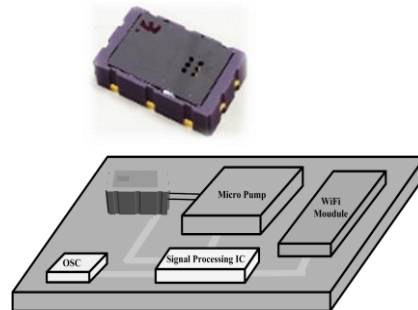
NFC, BT, ZigBee, RF4CE  
**Miniature Xtal (1210)**  
 Low package profile, low ESR

WiFi Module  
**Low Profile Xtal (1210)**  
 High drive, low ESR, wide temp (105C)



GNSS Module  
**Miniature TCXO (1612)**  
 Low profile, low voltage, wide temp (105C)

5G Modem  
**Miniature TSX (1612)**  
 High frequency, high drive level  
**Miniature VCTCXO (1612)**  
 High stability, wide temp (105C)



Optical Sensor Module  
**Miniature ALS+PS (2520)**  
 Single aperture and slim bezel smartphone

**Miniature Color+PS (2520)**  
 Single aperture and slim bezel smartphone



Particulate Matter Sensor Module  
**Miniature PM2.5 Sensor Module**  
 High accuracy, integrated humidity and temperature sensors for environment monitor and control

# New Growth

## 5G Base Station, Small Cell & Networking

Key growth products (Ultra Stability, Ultra Low Noise, High Frequency, High Reliability, Zero Defect Risk)

### 5G & Synchronization

RRU (Radio Remote Unit)

Close-in Ultra Low Phase Noise VCXO (3225)

BBU (Baseband Unit)

Ultra Stability OCXO (1409, 9775)

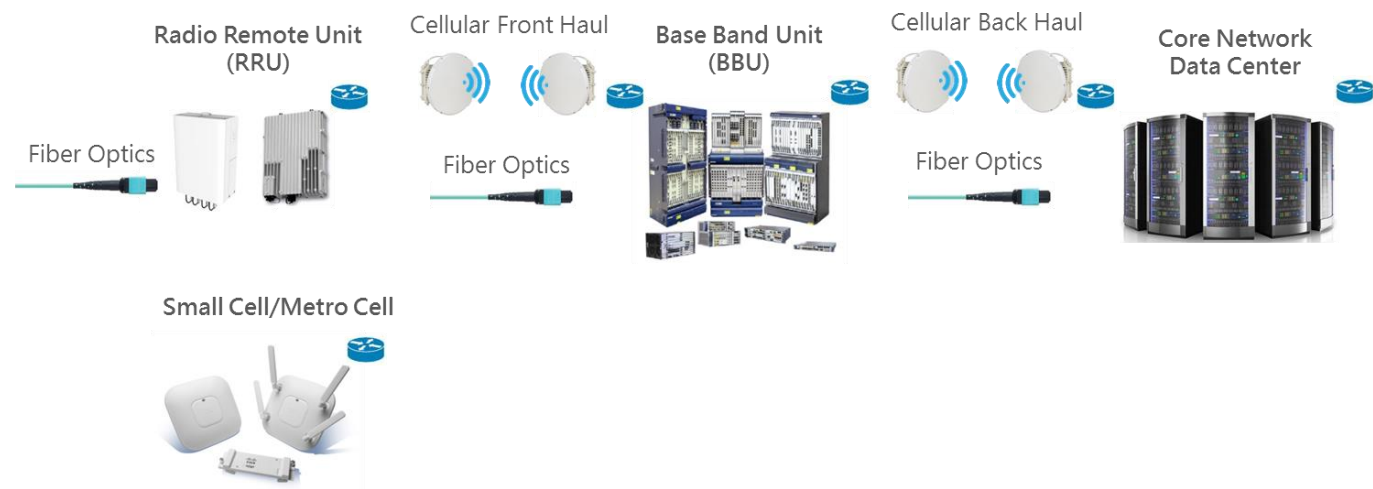
Ultra stability Stratum 3 TCXO (5032)

High Freq. Stratum 3 TCXO (1409)

### Data Center & Synchronization

High Freq. up to 2.1GHz & Ultra

Low Jitter XO and VCXO (7050)



# New Growth

## New in Automotive Applications

Key growth products (High Reliability, Wide Temperature Range, Zero Defect Risk)

### Infotainment & Telematics

Car audio	Glass	AR(2016)
WiFi/BT combo	Seam	AJ(1612)
GPS	TSX	AF(2016)
GPS/WiFi/BT	TCXO	AK(2016)



### ADAS, V2X, Self-Driving

Surround View	XO	AW(2520)
Rear/Front View	XO	AN(2016)
Radar (LR/SR)	TCXO	AL(2520)



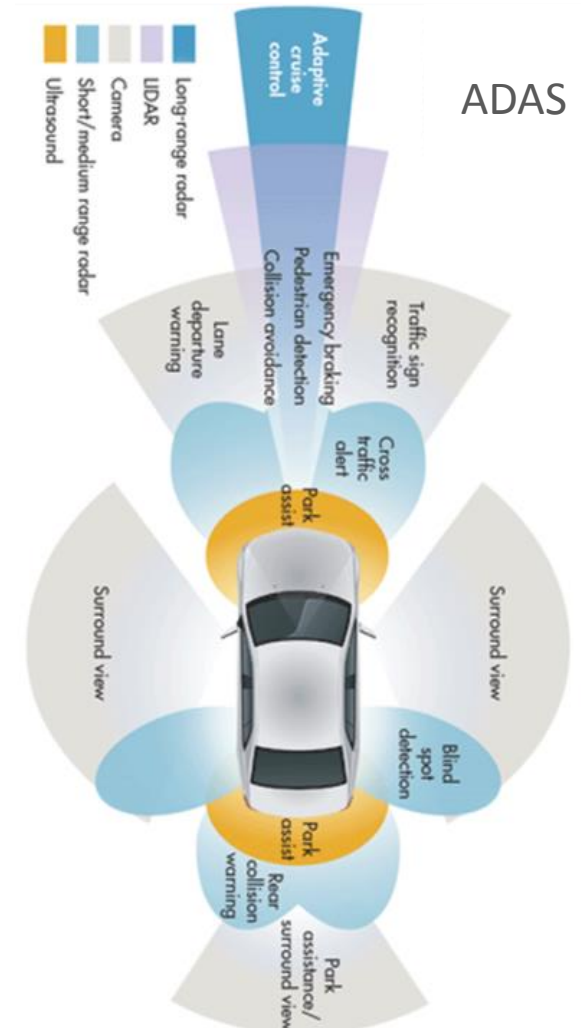
### Security Electronic System

BCM(MCU)	Glass	AX(8045)
BCM(MCU)	Glass	AV(3225)
Cluster	XO	AW(2520)



### Safety Electronic System

TPMS	Seam	AJ(1612)
BMS	XO	AU(3225)

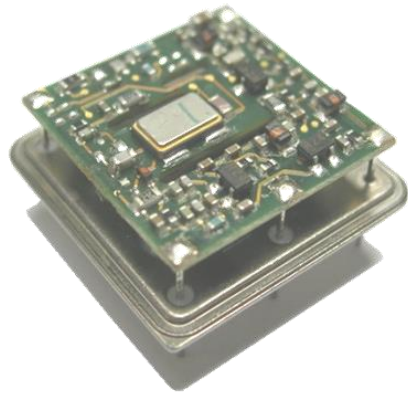


# New Highlights

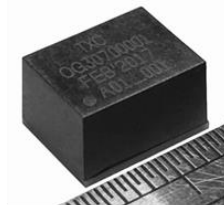
## Smallest, Innovative and Highest Integration

**Highly Integrated, Smallest, Ultra Stability**  
Oven Controlled Crystal Oscillator (OCXO)  
integrated in 9x7mm SMD package  
(Heater Ceramic Package Patented)

Convention OCXO (20x20mm)  
100~110 pcs components

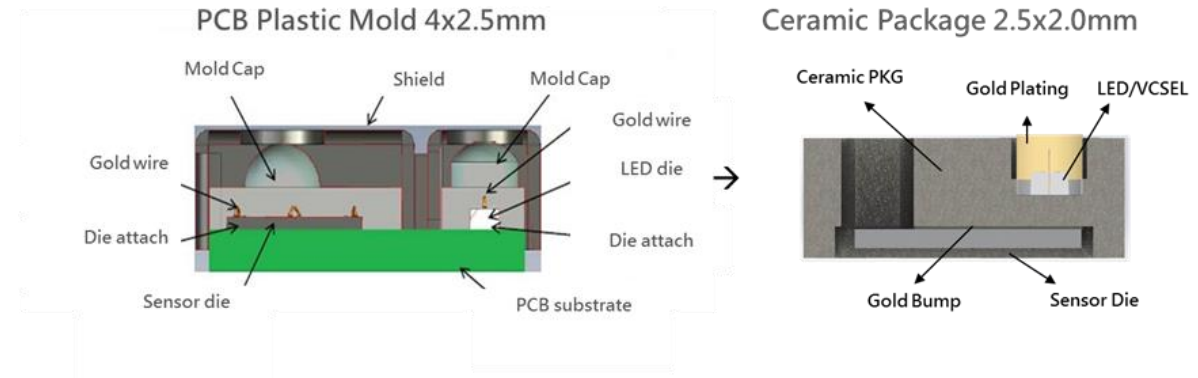


SMD OCXO (9x7mm)  
<10pcs components



Baseband Radio Access Network, mall Cell,  
Synchronous Networks (IEEE 1588, SyncE)

**Highly Integrated, Smallest, High Performance**  
Color+Proximity Sensor integrated in 2.5x2.0mm  
ceramic package  
(3D Stacking Ceramic Package Patented)



Smartphone, Tablet, Wearables, Camera, IoT

# Business Summary

## Create Value for Customers and Achieve Growth

### Key Business Segments

- IoT
- Automotive
- 5G and Networking

1. Focus on new growth to achieve sales
2. Collaboration to accelerate technology and innovation development to achieve time to market
3. Highly market-driven strategy and trend alignment to maintain market leadership
4. Product mix and bundle strategy to achieve greater profits
5. Investment in facilities, technologies, and employees are crucial to achieve high standard of quality & performance, zero defect risk, and professional