



# **RichWave Technology Corp.**

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2018 Q2 Investor Conference

Aug 06, 2018

**Vision**



# **World RF IC Leader by Technology and Innovation**



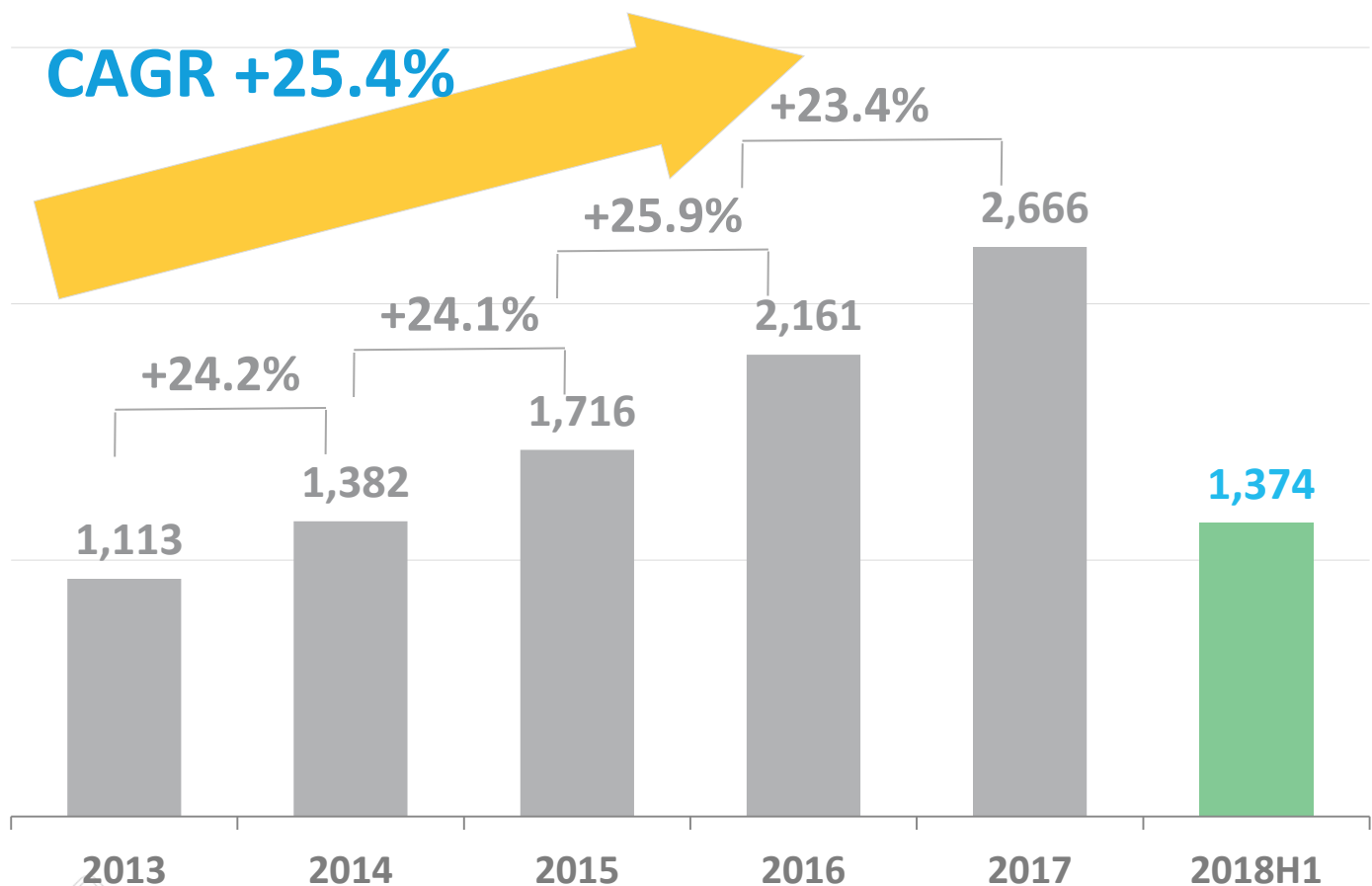
# Q2'18 P&L

	2018 Q2		2018 Q1		QoQ	2017 Q2		YoY
Amount:NT\$ MN	Amount	%	Amount	%	%	Amount	%	%
Net Sales	712	100%	662	100%	7.6%	655	100%	8.7%
Gross Margin	229	32.1%	205	31.0%	11.7%	238	36.3%	-3.8%
Operating Expense	180	25.3%	155	23.4%	16.1%	152	23.2%	18.4%
Operating Profit	49	6.9%	50	7.6%	-2.0%	86	13.1%	-43.0%
Non-Op. Profits(Loss)	12	1.7%	-6	-0.9%	300.0%	3	0.5%	300.0%
Net Income before Tax	61	8.6%	44	6.7%	38.6%	89	13.6%	-31.5%
Net Income after Tax	47	6.6%	36	5.4%	30.6%	74	11.3%	-36.5%
EPS	0.86		0.66			1.36		



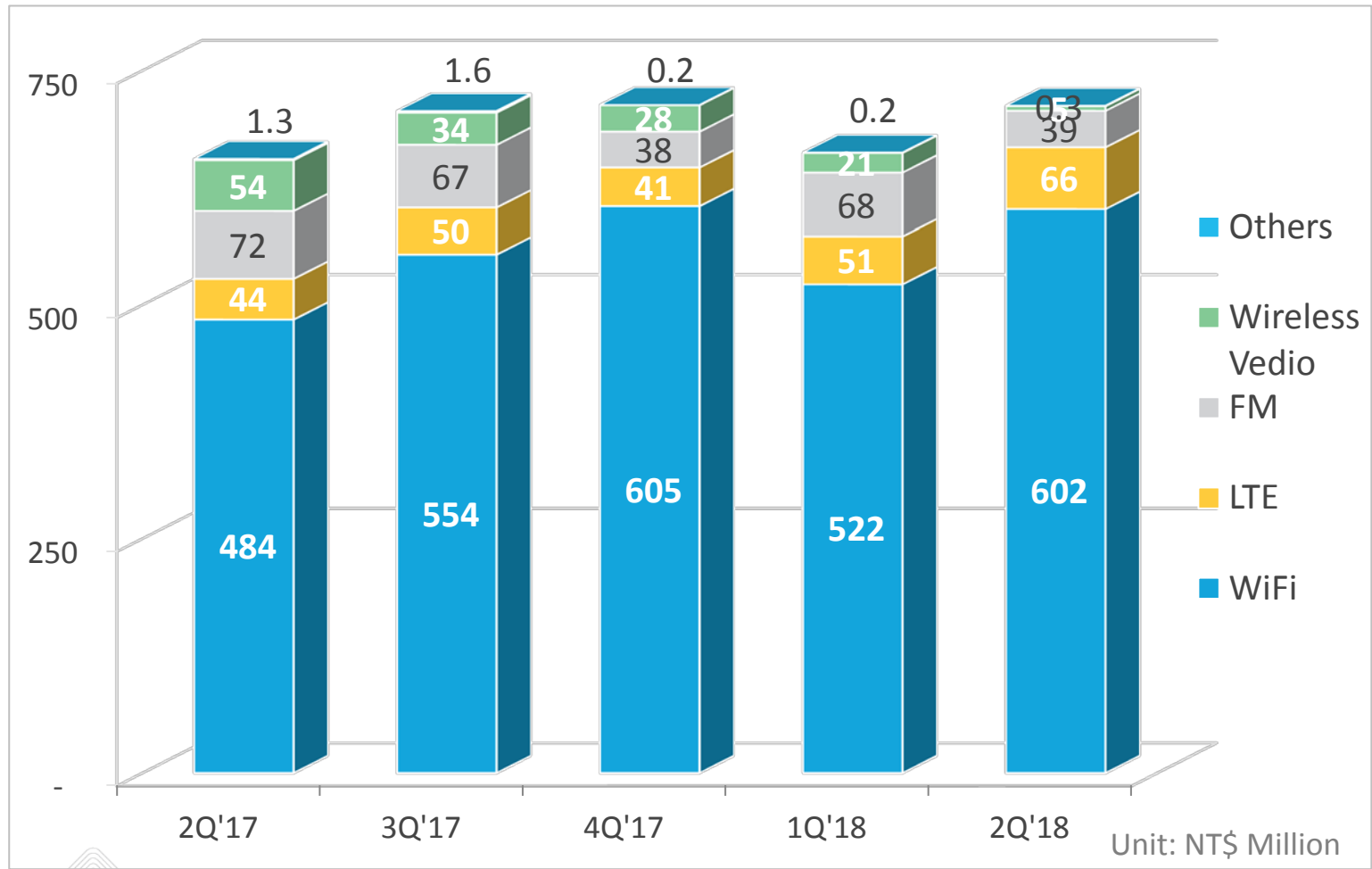
# Net Sales 2013~2018H1

Steady and Continuous Growth

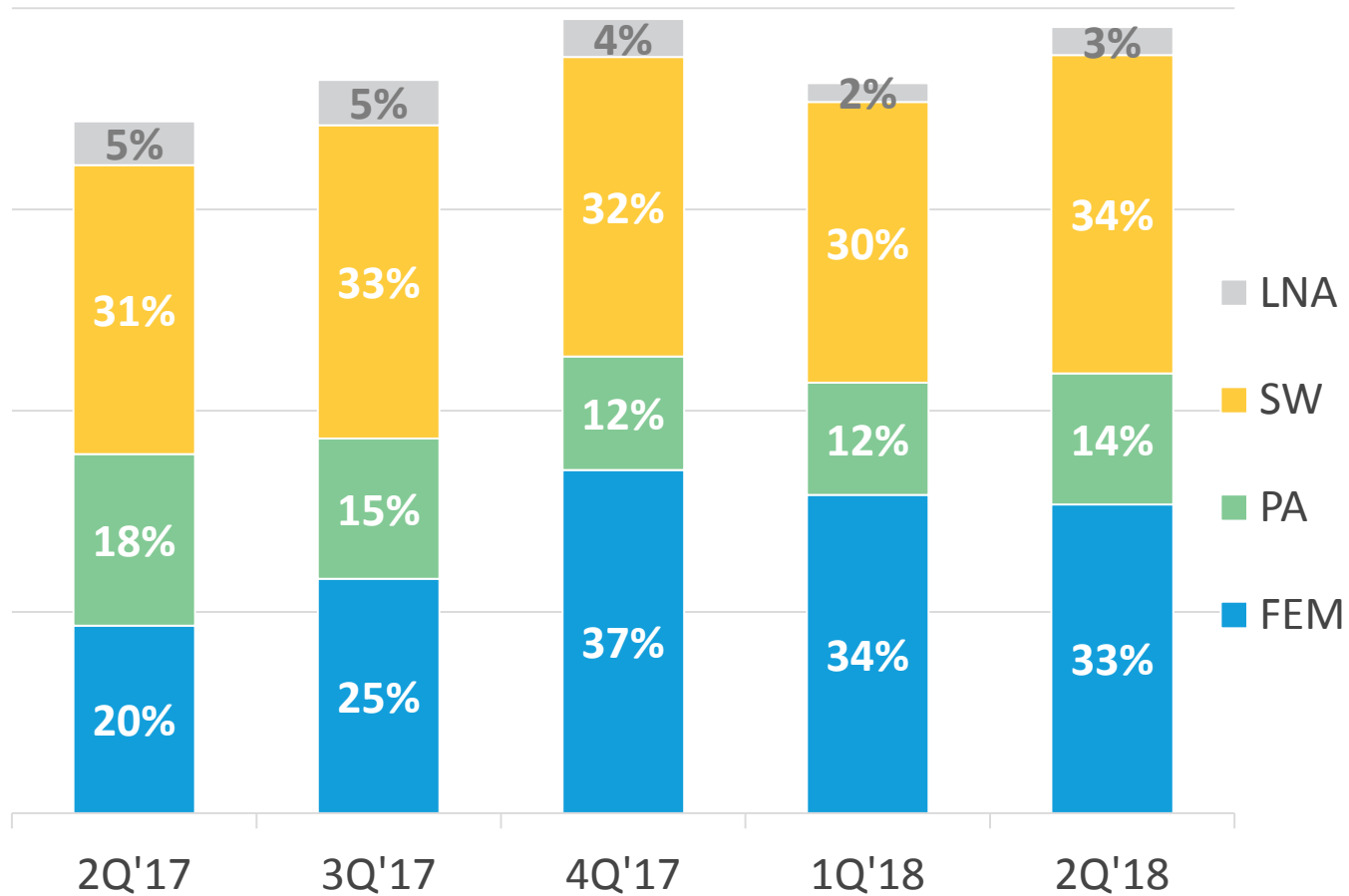


Unit: NT\$ million

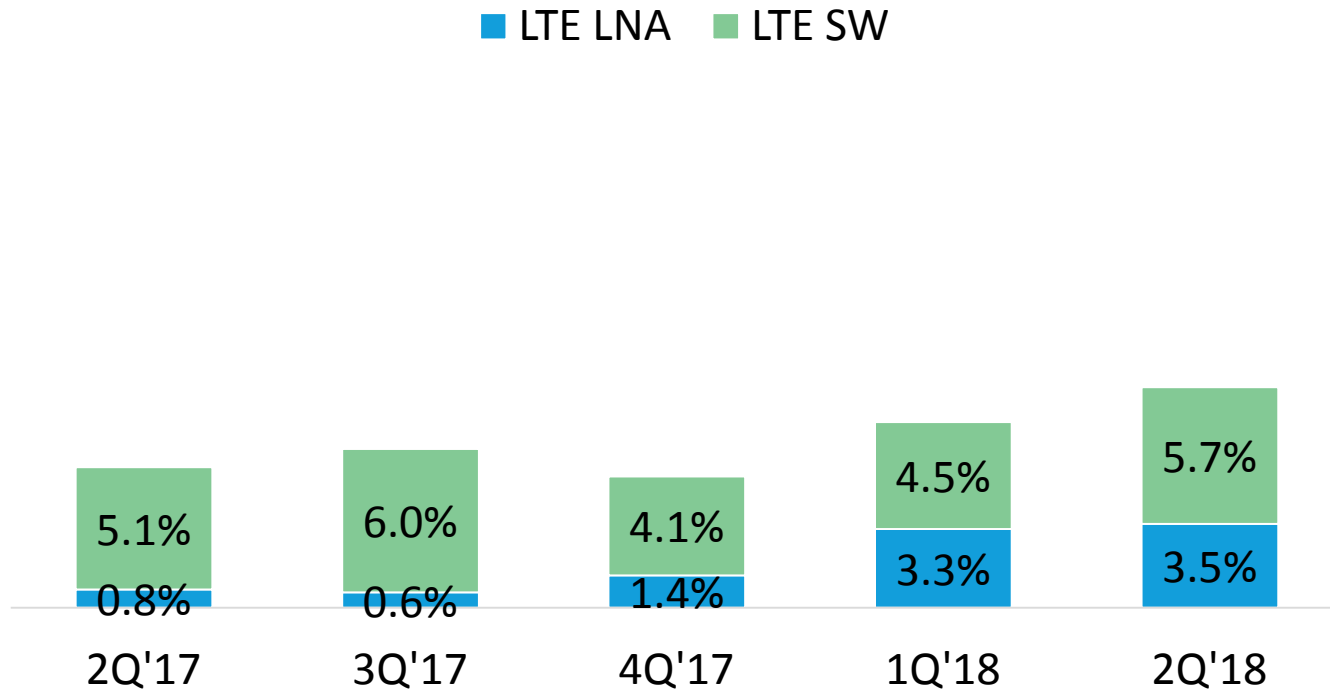
# Revenue by Products



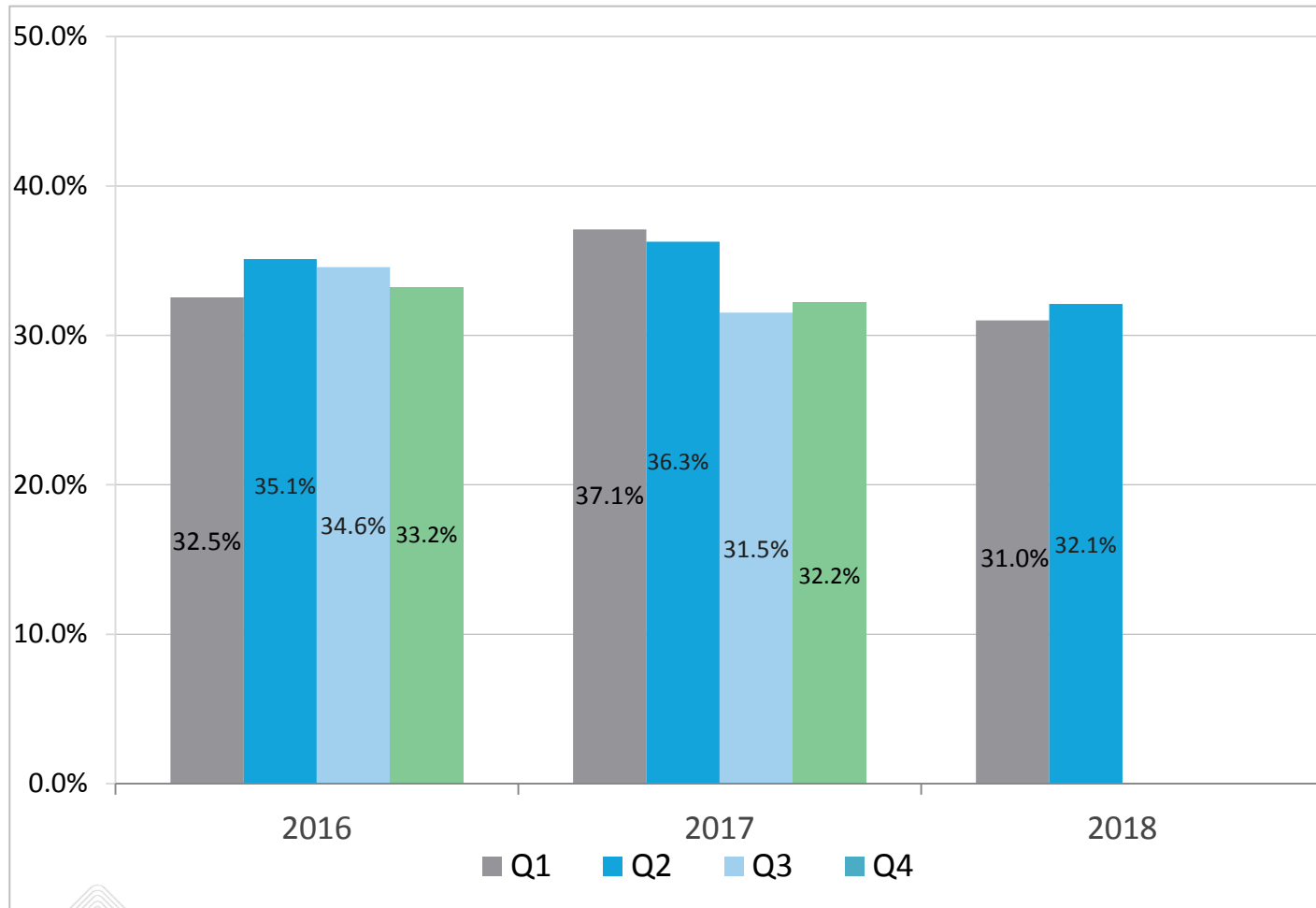
# WiFi and FEM Continue Grow



# Mobile/ LTE Increase by Diversified Portfolio on Brand Mobile

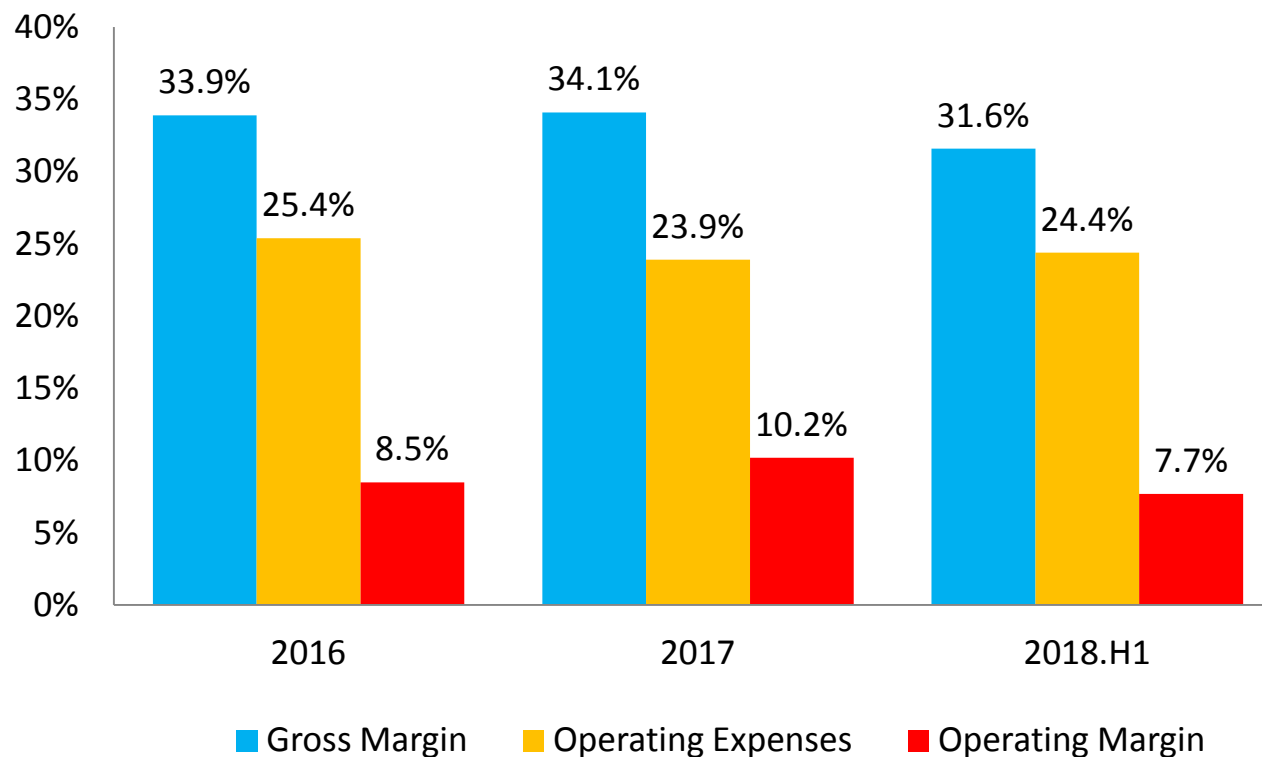


# Gross Margin Trend 2016~2018Q2



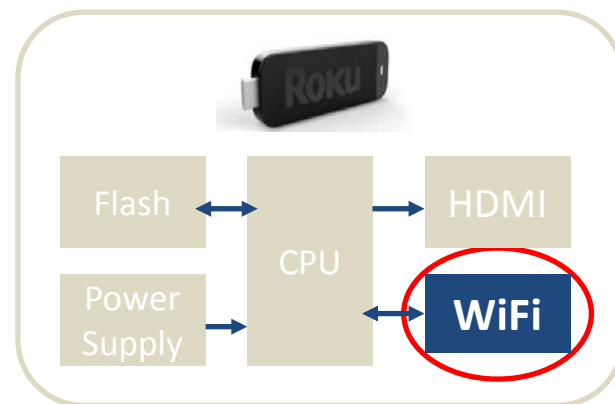
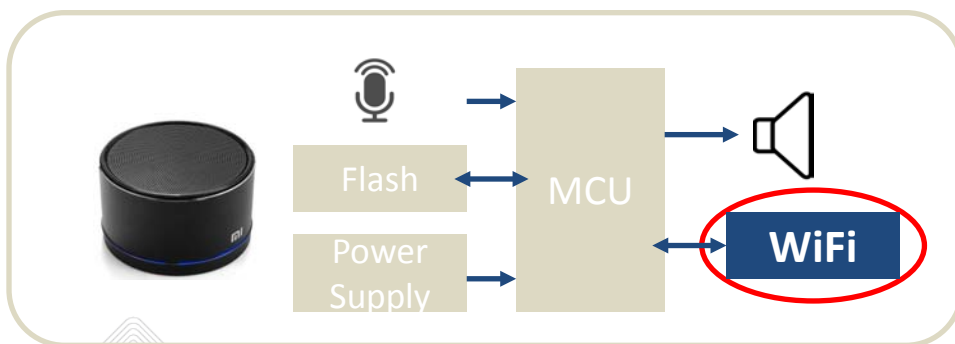


# Performance 2016~2018H1



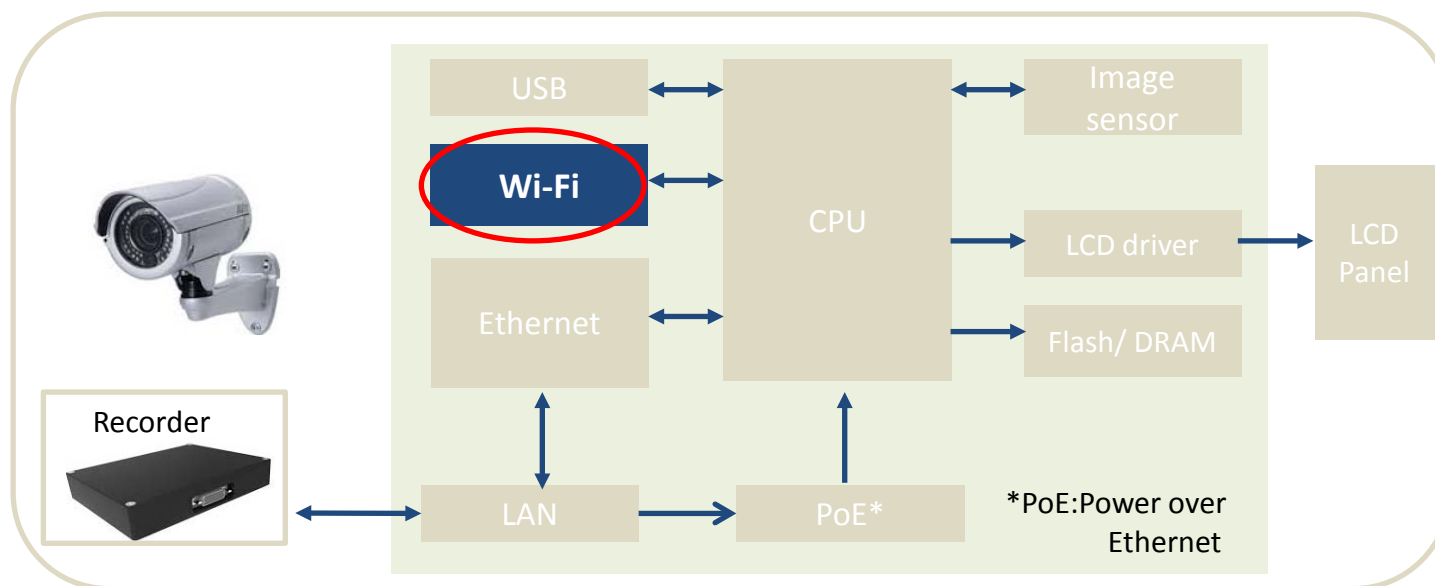
# WiFi Business Emerging in Router, STB/OTT, IOT/ Speaker and Surveillance

- 11ac with increased MIMO.
- Launch new FEM with small form, high power 2GHz/ 5GHz and POE
- 11ac FEM expanding to telecom operators on global base.
- Developing to 11ax
- Wide-spreading with IOT: Speaker, Smart Speaker, Gaming, etc...



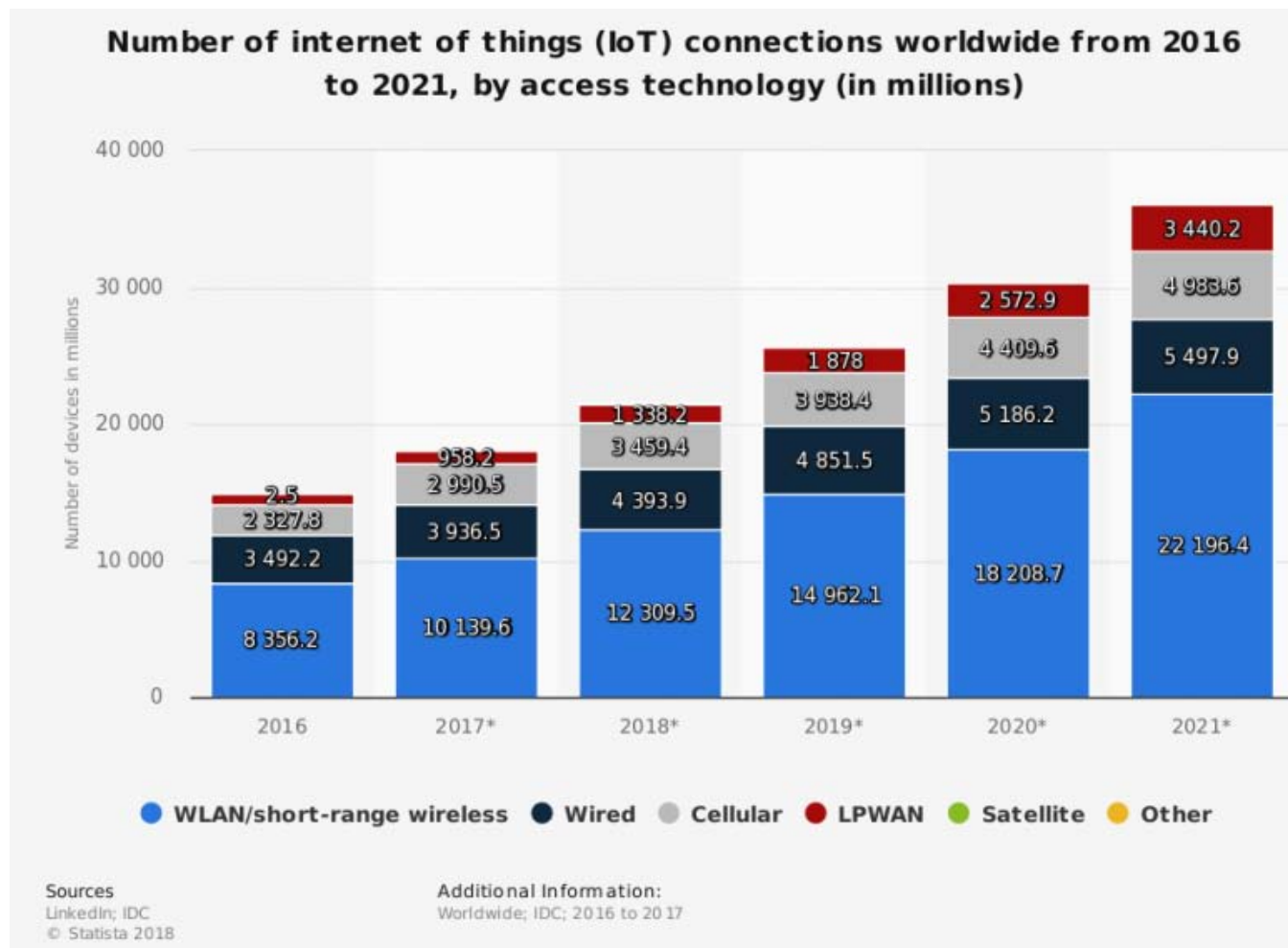
Source: Web. Info.

# Extended WiFi Application- Smart Home Surveillance



Source: Web. Info.

# Growing Demand for WiFi Connected



# 11ac/ax Speed & Capacity Growth Multiply

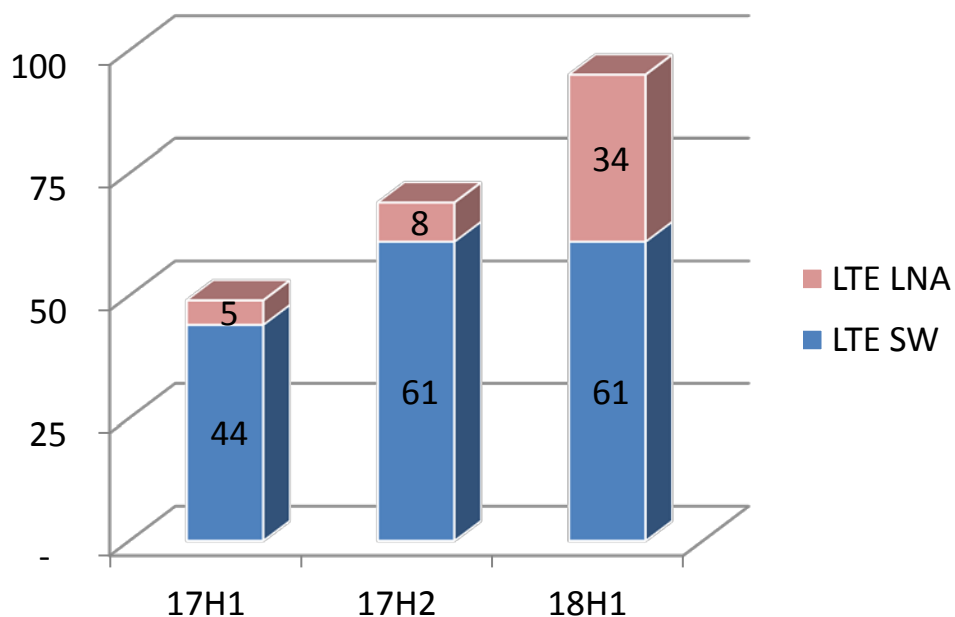
	802.11g	802.11n	802.11ac	802.11ax
使用頻段	2.4 GHz	2.4/5 GHz	5 GHz	2.4/5 GHz
使用頻寬	20MHz	20MHz 40MHz	20MHz 80MHz 40MHz 160MHz	20MHz 80MHz 40MHz 160MHz
最高天線數	1X1 SISO	4X4 MIMO	8 MIMO(MU-MIMU)	12x12 MIMO
現有標準速度 (理論值)	54 Mbps	150 Mbps 300 Mbps 450 Mbps (頻寬40MHz)	433 Mbps 867 Mbps 1300 Mbps (頻寬80MHz)	600.4 Mbps 9607.8 Mbps
最高速率(理論值)	54 Mbps	600 M bps	6.93 Gbps	9.6 Gbps

Source: [adrenaline.uol.com.br](http://adrenaline.uol.com.br)

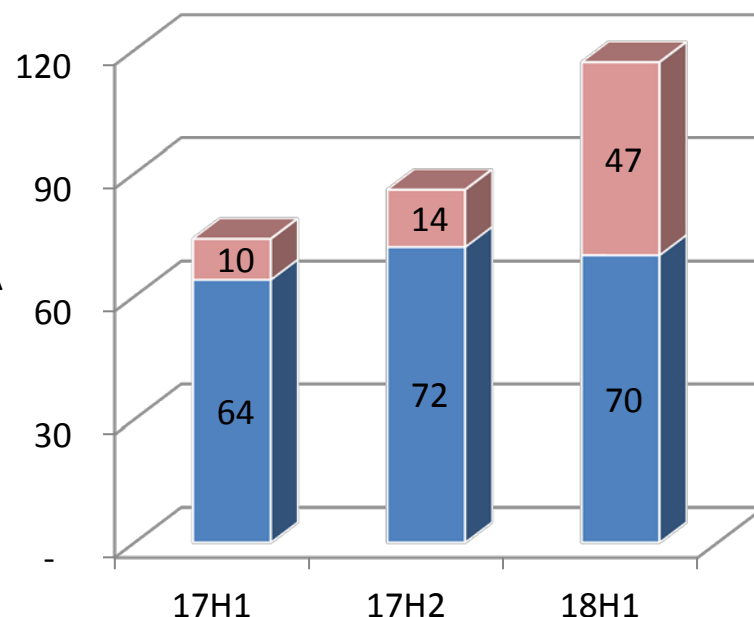
# Richwave LTE LNA/SW for Mobile

LTE SW/LNA growth from China top brand. Continue penetrating into global brands.

(A) Shipment Unit: KK



(B) Revenue Unit: NT\$ million



# WiFi in Mobile

- 2GHz full FEM and 5GHz full FEM start mass production.



Source: Web. Info.



# Broadcasting

- FM continue landing on Flagship phone, expanding to High-end phone.
- AM Radio/Boombox: initial allocation in Clock/Seeking Radio, penetrating Art Radio.







**RichWave**