



# **RichWave Technology Corp.**

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Taiwan Tech Tour

Mar. 2019

# COMPANY OVERVIEW

SHANGHAI  
SHENZHEN  
SEONGNAM  
TAIPEI  
CHUPEI

SAN JOSE



Founded  
**Jan. 2004**



Listed in TSE  
**Nov. 2015**



Customers  
**350**



Products  
**270**

**Vision**



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

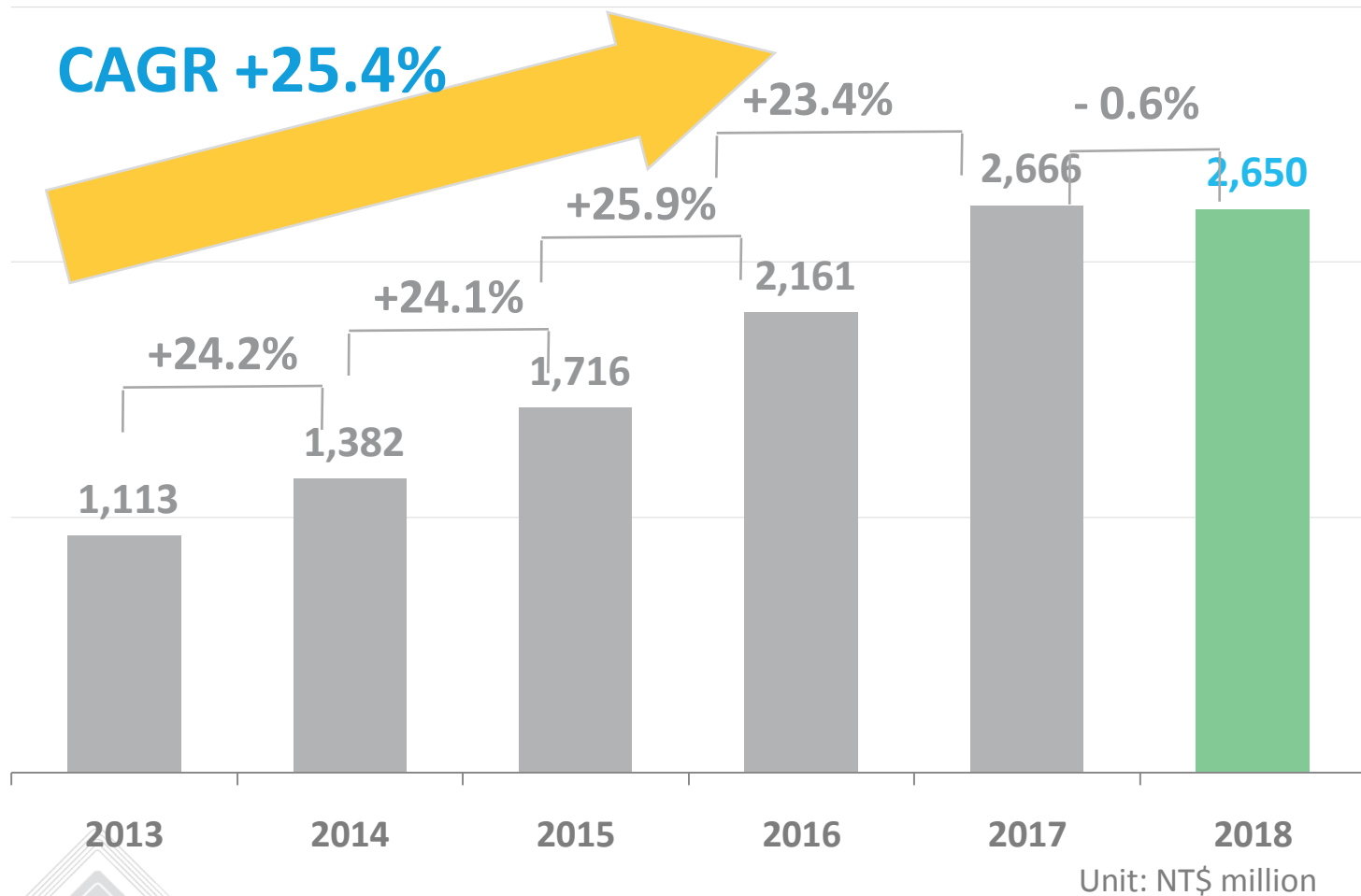


# 2018 Q4 P&L

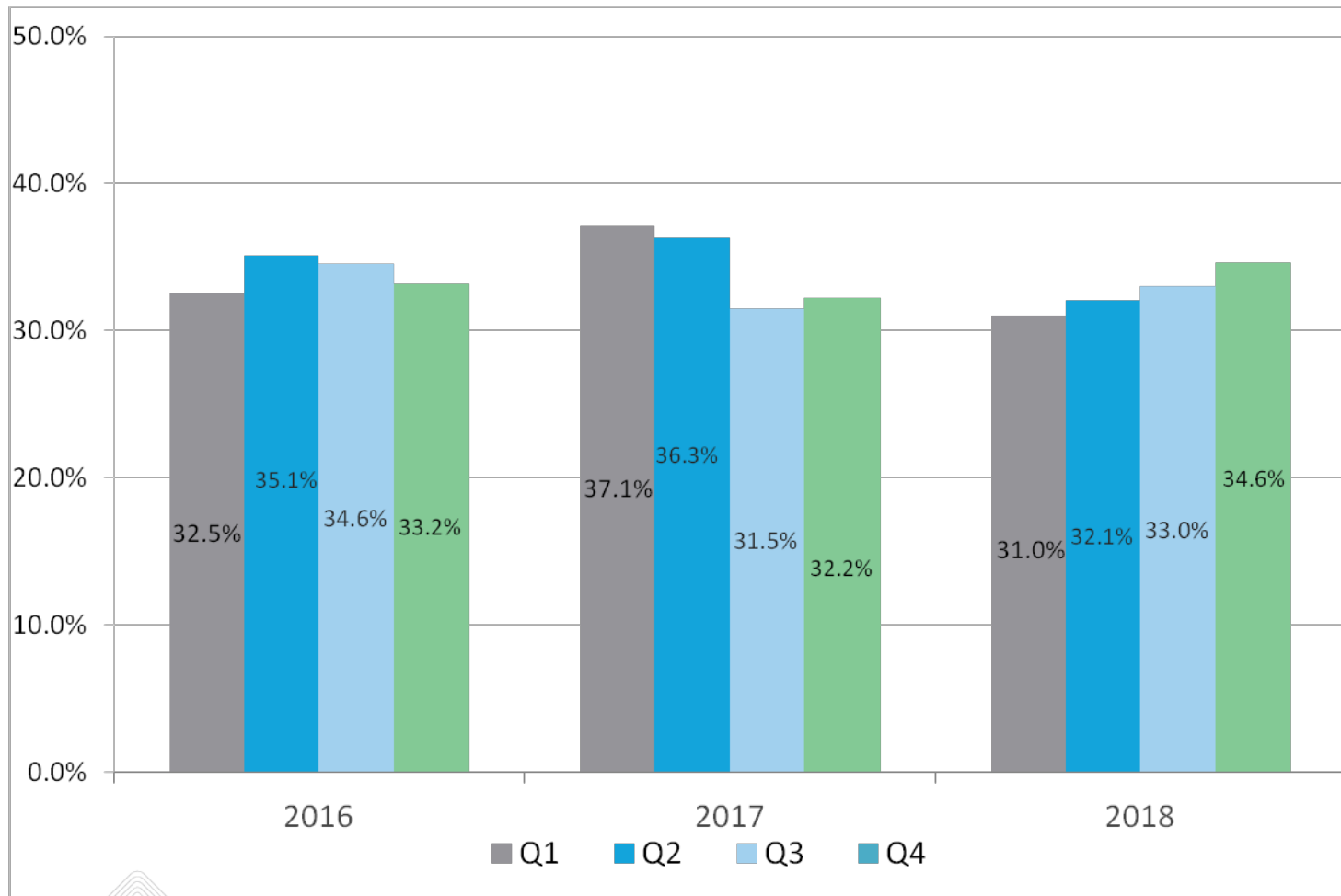
Amount:NT\$ MN	2018 Q4		2018 Q3		QoQ	2017 Q4		YoY
	Amount	%	Amount	%	%	Amount	%	%
Net Sales	606	100.0%	669	100.0%	-9.4%	713	100.0%	-15.0%
Gross Margin	210	34.6%	221	33.0%	-5.0%	229	32.1%	-8.3%
Operating Expense	164	27.1%	164	24.5%	0.0%	158	22.2%	3.8%
Operating Profit	46	7.5%	57	8.5%	-19.3%	71	10.0%	-35.2%
Non-Op. Profits(Loss)	1	0.2%	5	0.7%	-80.0%	-5	-0.7%	
Net Income before Tax	47	7.7%	62	9.2%	-24.2%	66	9.3%	-28.8%
Net Income after Tax	40	6.6%	54	8.1%	-25.9%	59	8.3%	-32.2%
EPS	0.65		0.89			1.07		

# Net Sales 2013-2018

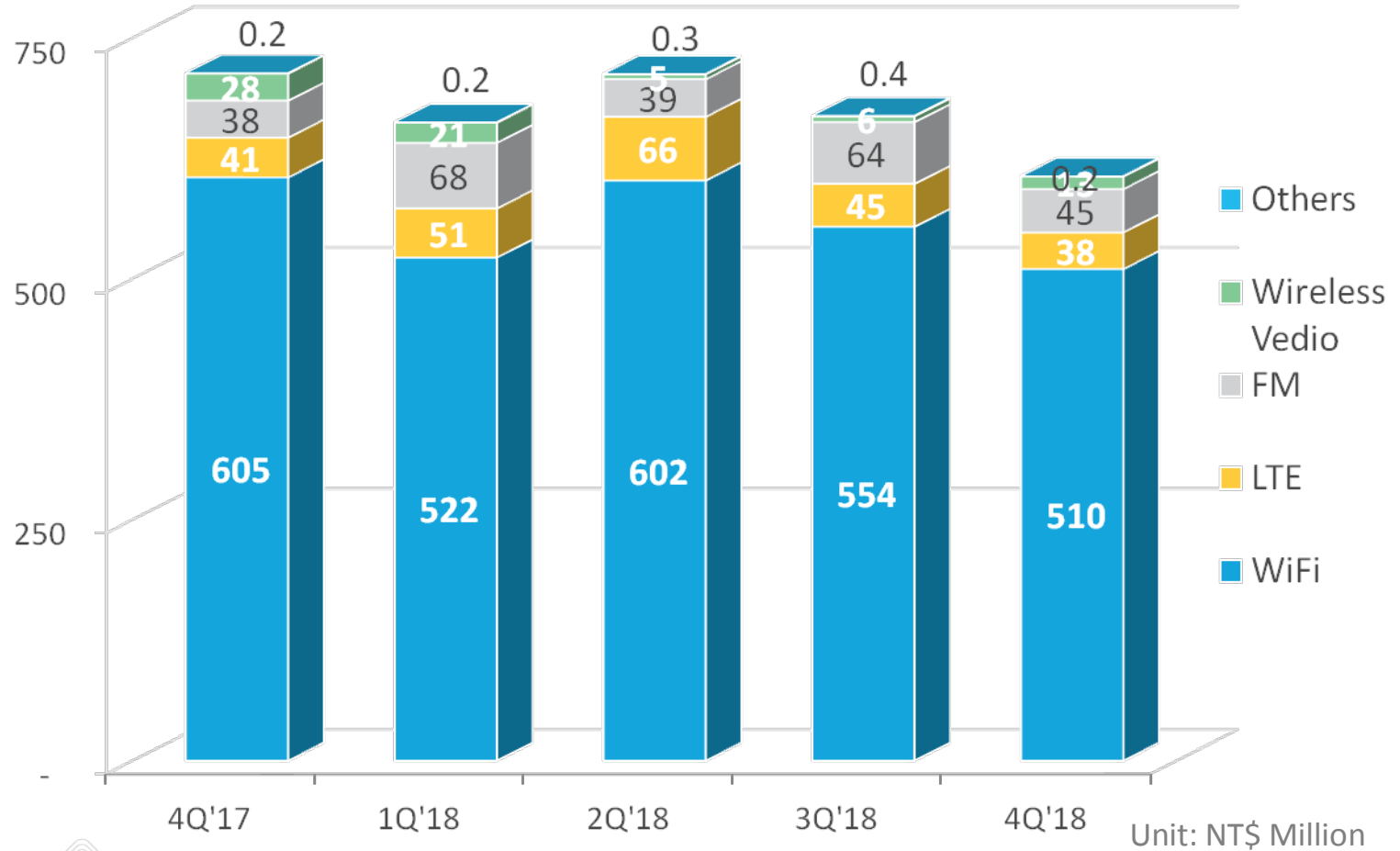
Steady and Continuous Growth



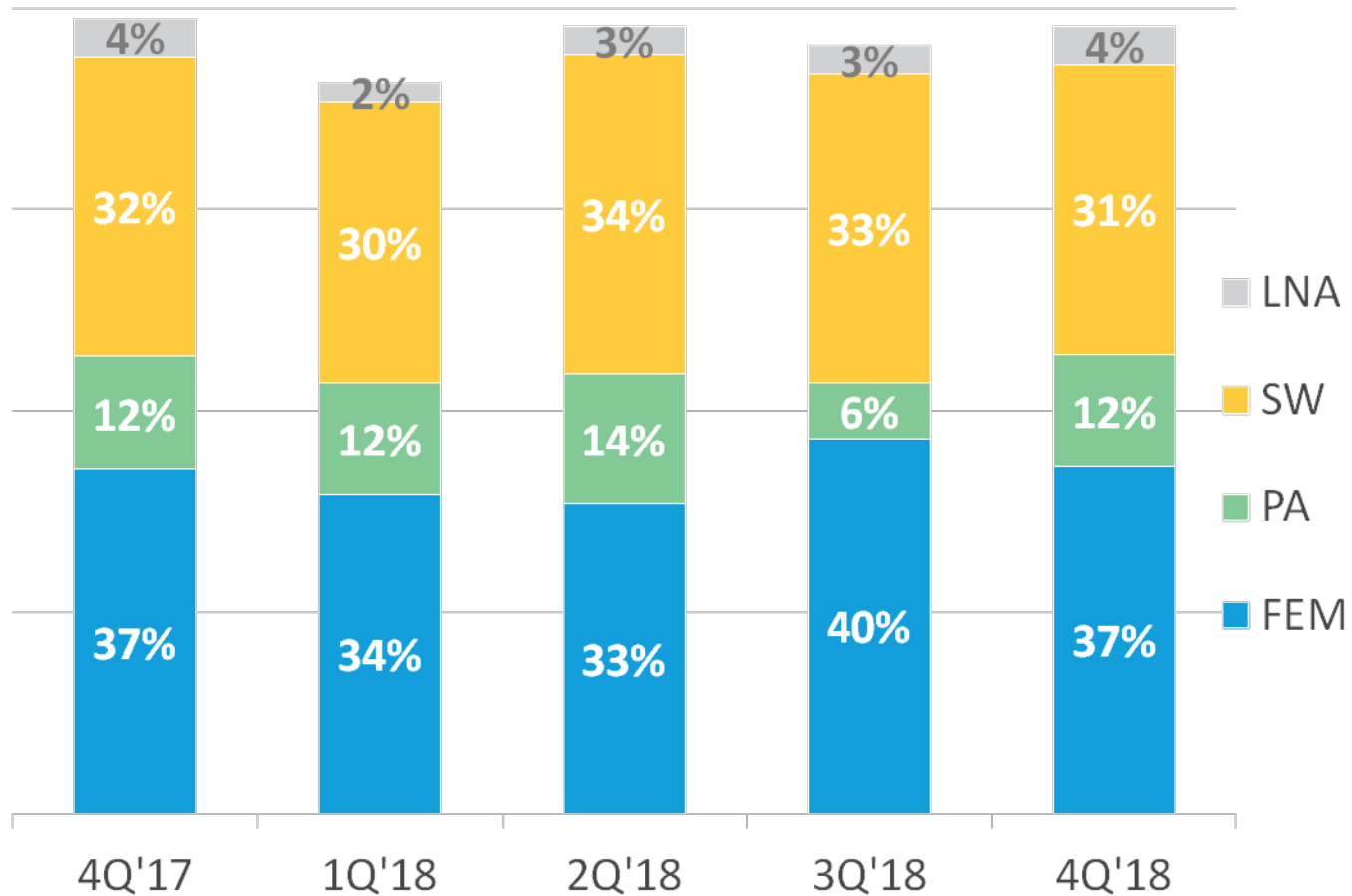
# Gross Margin Trend 2016-2018



# Revenue by Products

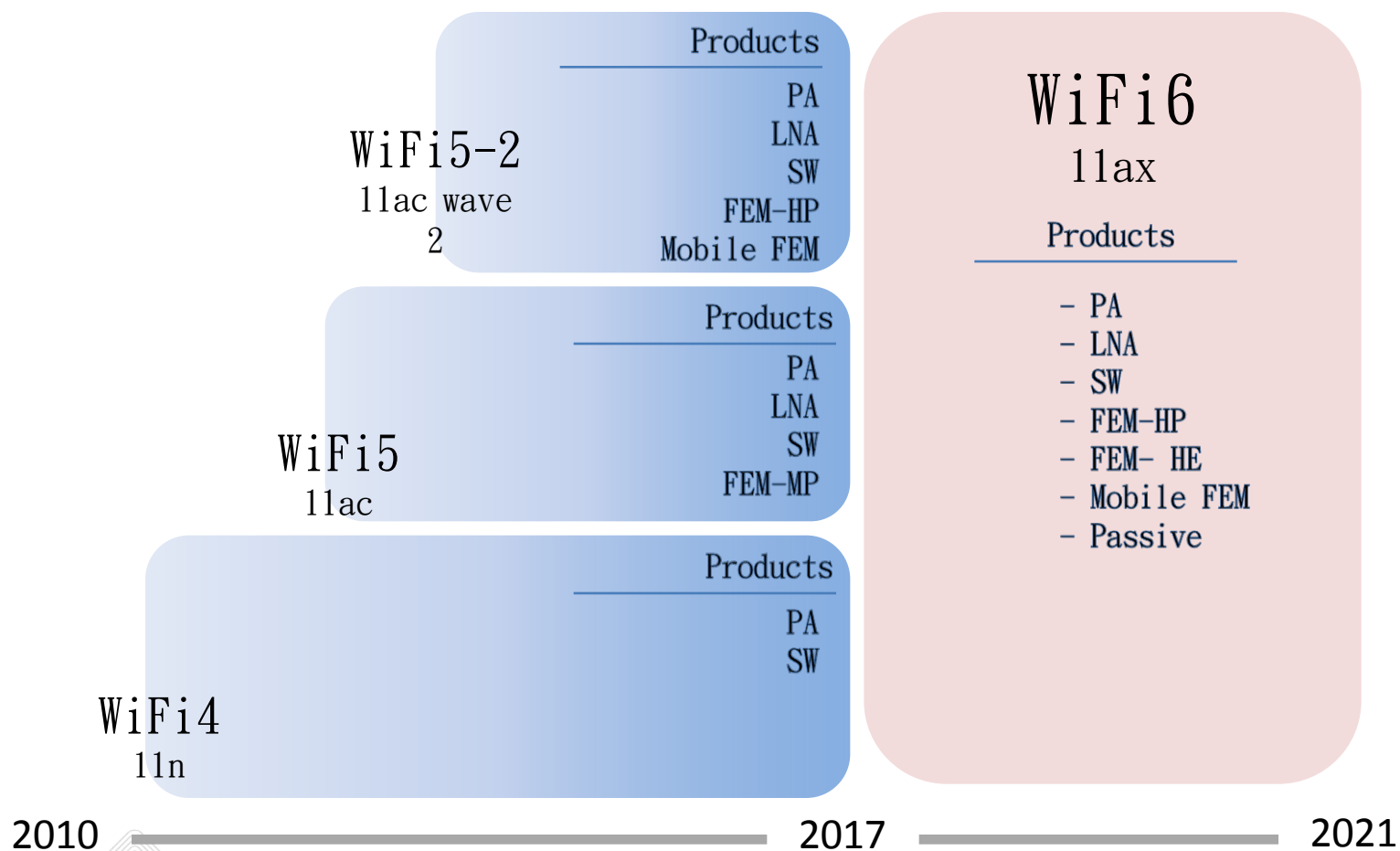


# Focus on WiFi FEM Growth



# RichWave –WiFi

## Enabling Solutions for Broadband Applications



# Momentum & Energy of Growth



# Business Highlights – WiFi

- Won Broadcom 11ax reference design for platforms
  - 4x4 performance segment – 2G FEM & 5G FEM
  - 2x2 main stream – 5G FEM
- Won Quantenna 11ac reference design for platforms
  - 4x4 performance segment & main stream – 5G FEM



# Business Highlights – WiFi

- Penetrated Fiberhome with 11ac FEM for overseas & domestic carriers models
- Won 11ac high power PA design for TP-Link AP routers
- Shipped 11ac FEM devices for Technicolor and Sagemcom PON residential gateways & STB models
- Shipped 11ac FEM devices for DT, BT and other European telco PON residential gateways
- Won 11ac high power PA and FEM design for US Actiontech AP routers
- Shipped 11ac FEM devices for ZTE China mobile PON residential gateways
- Won 11ac FEM design for Nokia mesh AP router
- Won switch design for Google IP cam

FiberHometp-linkSAGEMCOMtechnicolorActiontec®ZTENOKIAGoogle

# Business Highlights – Automotive

- Shipped 2G Rx FEM and 5G full FEM devices for WiFi modules for GM automotive
- Shipped LTE Switch devices for LTE modules for Bosch automotive



**BOSCH**



# Business Highlights – FM

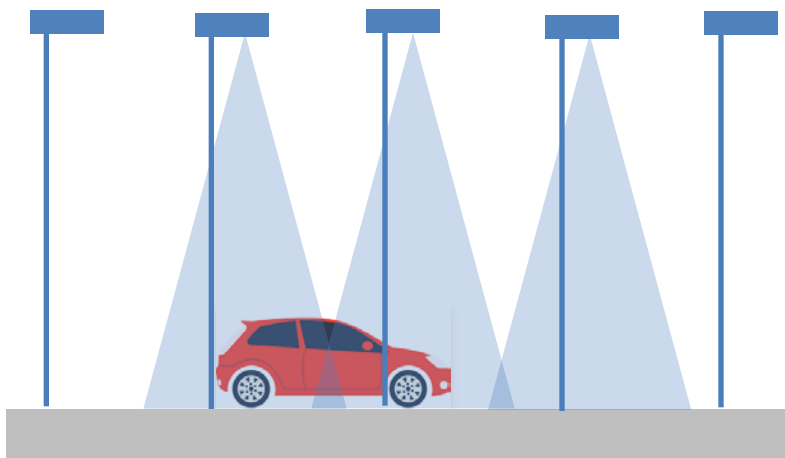
- Shipped FM devices to Samsung Galaxy S9/10 & Note8/9
- Shipped FM devices to LG Falcon
- Won FM design for Samsung Note10 & Samsung Fold
- Won Qualcomm reference design for mobile platform
  - Qualcomm's next generation flagship – new FM device



# Business Highlights – RF Sensor

- Won motion detection sensor design for Signify street lighting control
- Won motion detection sensor design for US outdoor security light control

## Street light



1. Turn on when car approaching
2. Turn off when car passing
3. Save energy and efficiency

## Outdoor security light



Wide view angle & long Sensing distance Max ~20M



**RichWave**