

RichWave Company Profile

- December 2015



Company Overview

- A leading & innovative wireless RF IC design company
- Founded : January 2004
- Capital : NT\$499 millions
- Employees : 160
- Products Evolution :

2005~2007



SiGe PA for 802.11b/g, Wireless Video-Sender

2008~2011



WiFi Switch, GaAs PA, FEM for 802.11N, FM, Wireless-Video Transceiver

2012~2015



WiFi FEM, PA, Switch, LNA for 802.11ac, ASM in Cellular 3G/4G, Femto, Wireless-Surveillance Transceiver

















RF is Key to Connectivity

- Growing demand for information leads to huge growing demand for mobile & wireless data transfer over the various communication channels.
- In specific, RF plays the role of key components in WiFi & mobile.



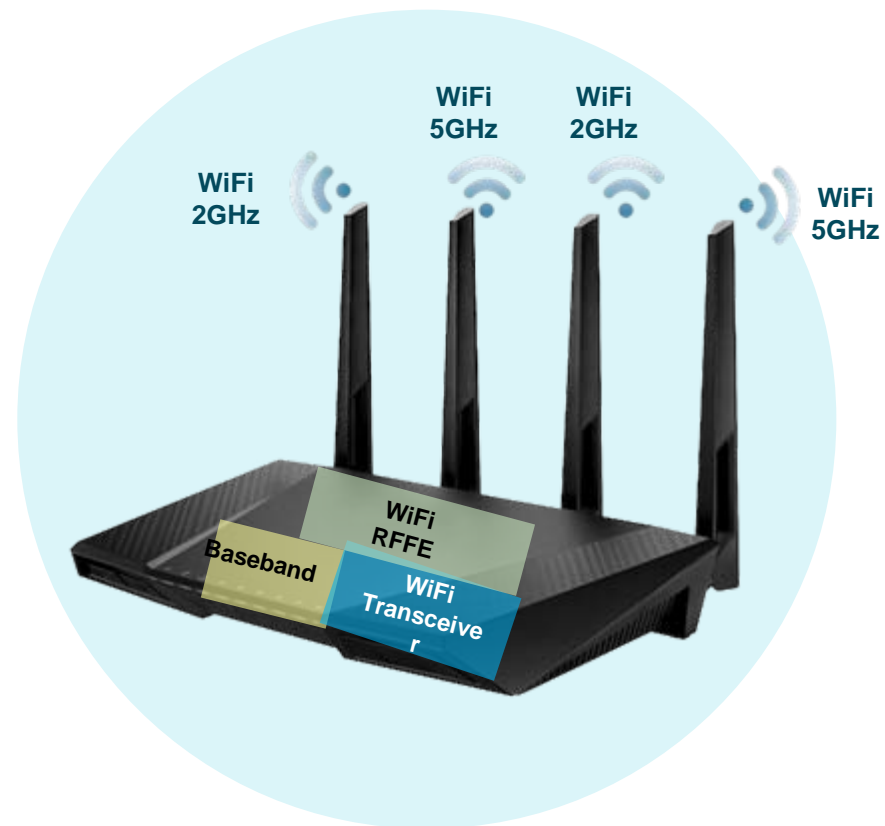
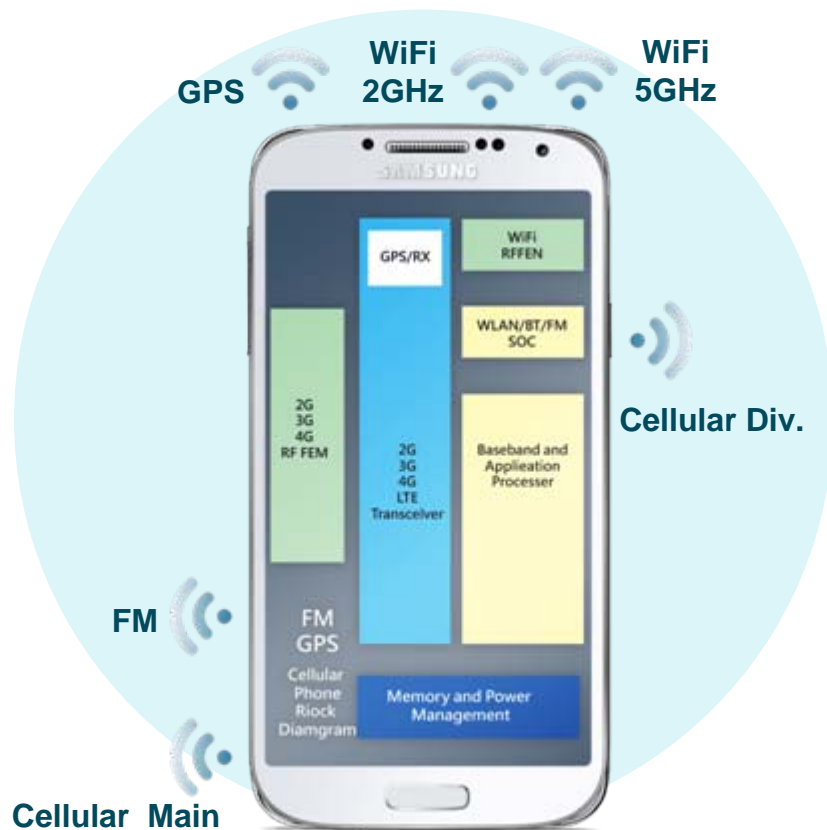
Richwave RF is Everywhere

Richwave RF includes RFFE & RF transceiver, which covers WiFi, mobile & other IoT applications.

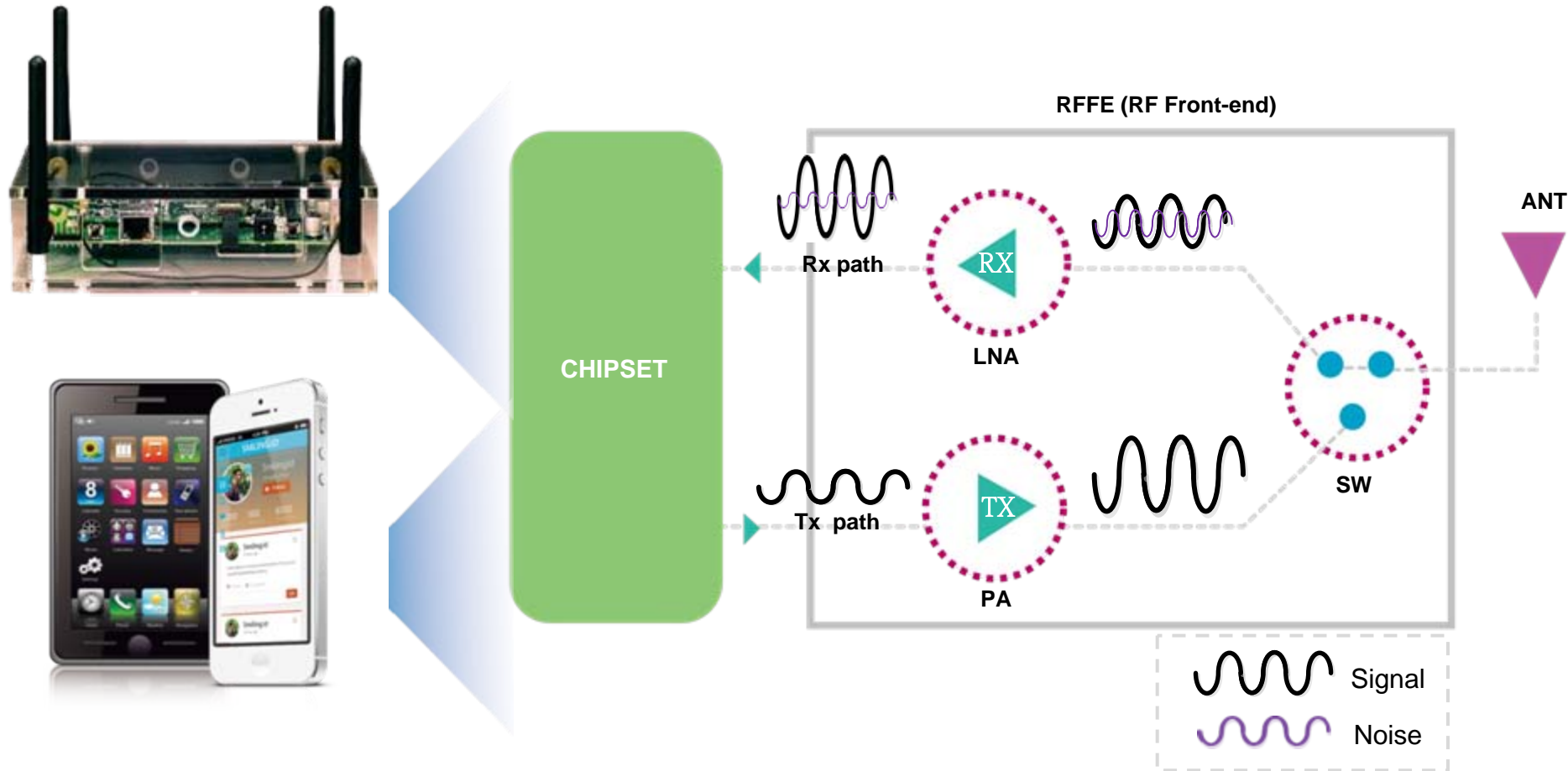
					
PA, LNA, SW, FEM					
ASM					
Video Transceiver & Broadcast					

RF Specifics in WiFi & Mobile

Multiple sets of RF components are needed, including RFFE, ASM, FM, GPS, etc.

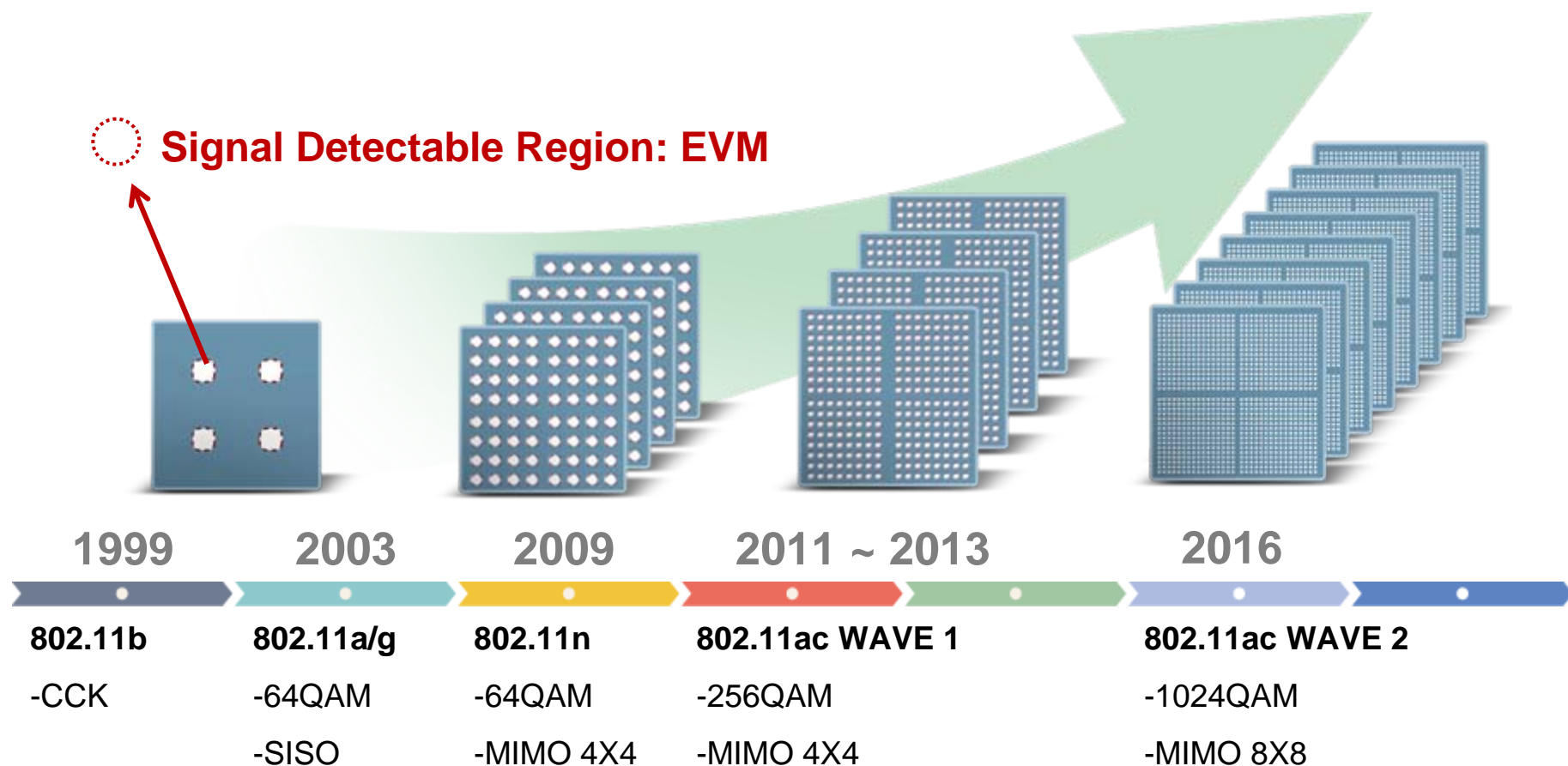


WiFi RF Role & its Criticalness



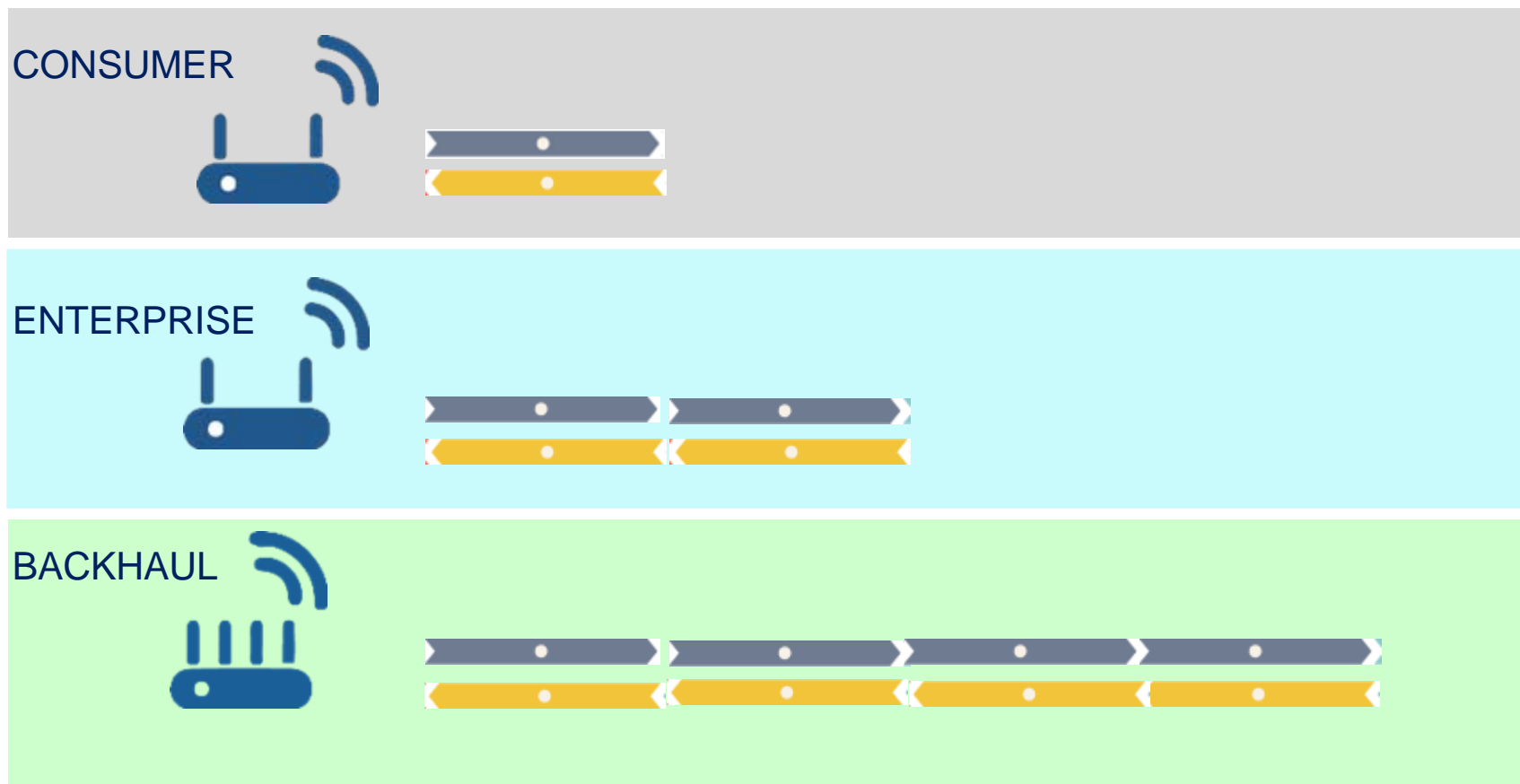
Surge Demand on Throughput

- Driven the complexity in technology



Multiple Coverage Range Needed

- Affect Design Difficulty, Transmit and Receive



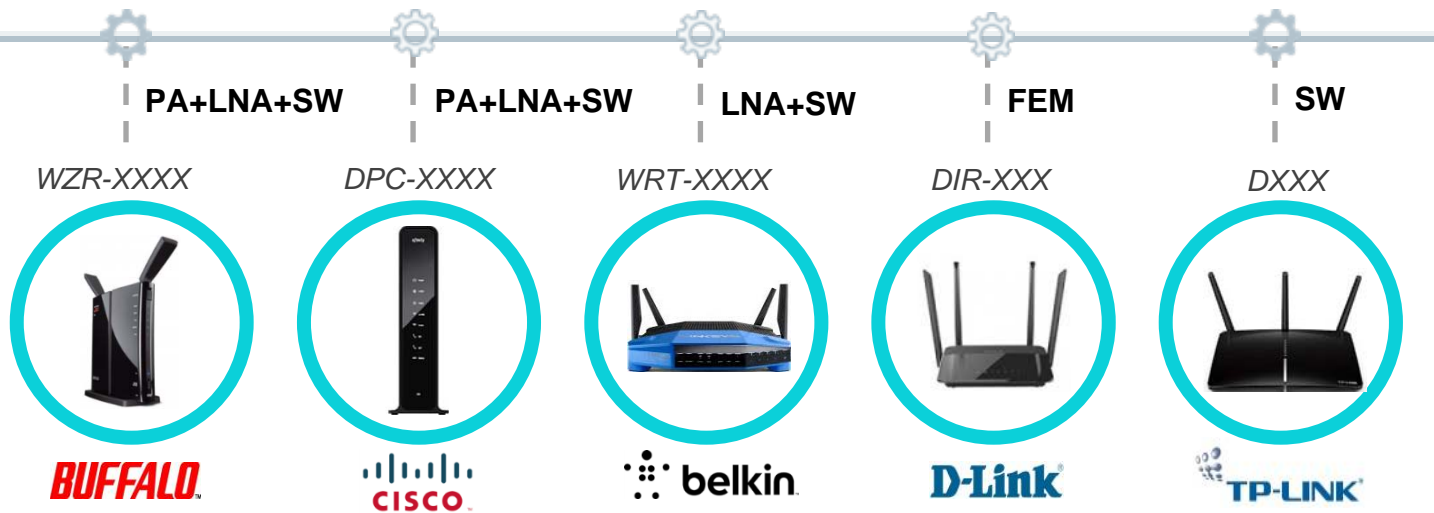
Requested Transmit Signal Strength (PA)

Requested Sensitivity on Receive Signal (LNA)



WiFi Applications with RichWave

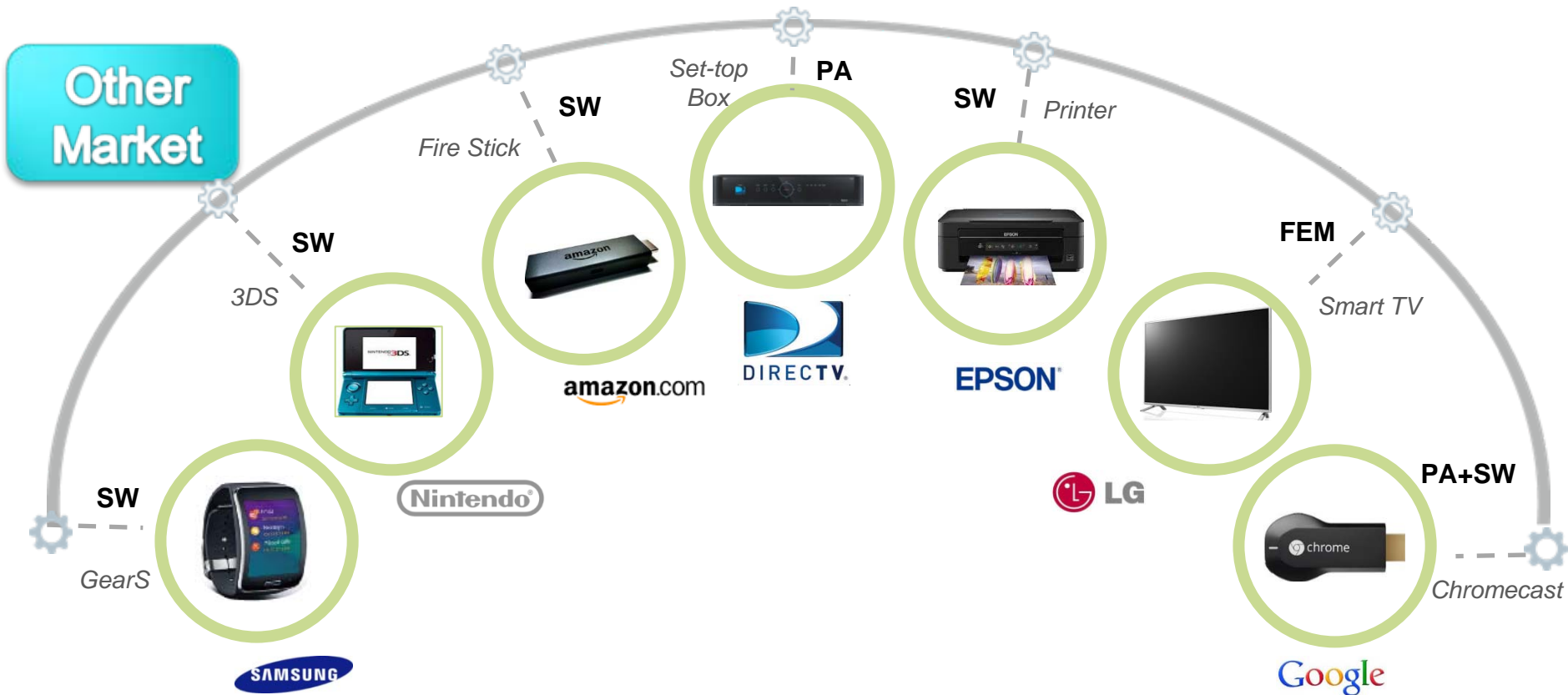
Router



Mobile

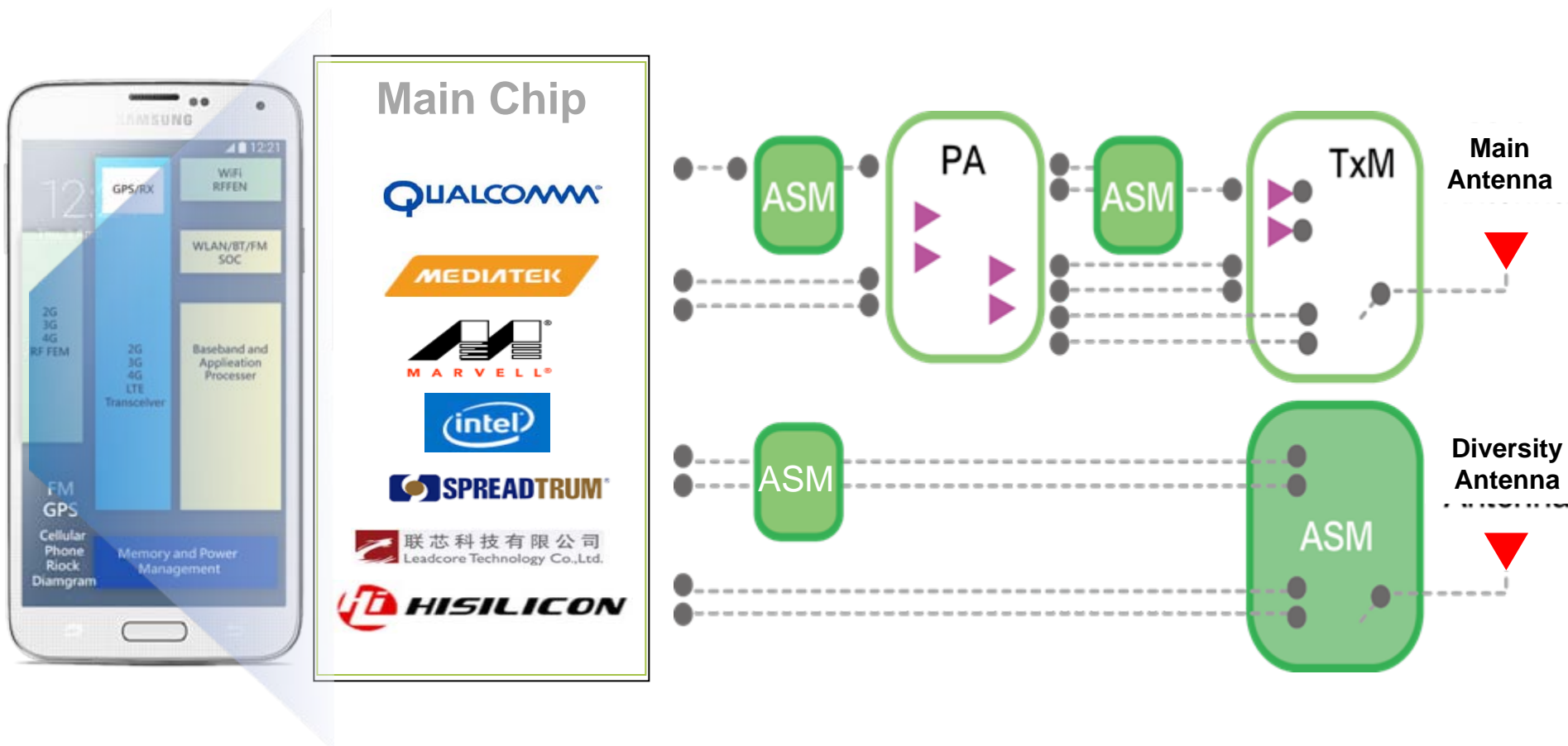


WiFi Applications with RichWave



Antenna Switch Module(ASM)

- Critical Part in Cellular Front End

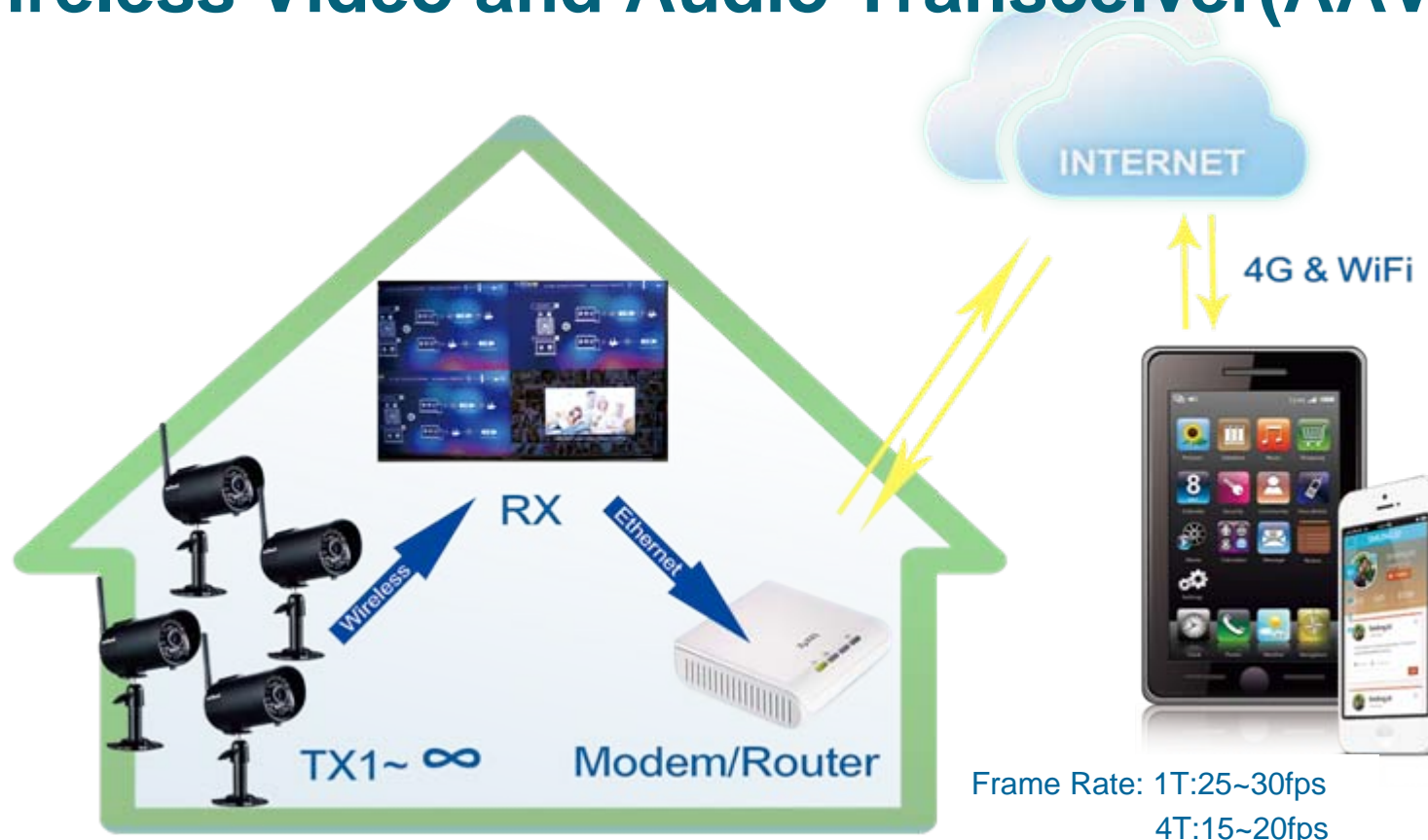


Mobile Applications with RichWave



Smart Home Applications

-Wireless Video and Audio Transceiver(AAV/DAV)



- Provided multiple instant remote control, independent recording, playback and push function with APP Developer Interface.
- Support smart home applications, such as automation and lighting control.

Other Applications in IOT

Wireless Parking Assist System



- Switchable between parking assist mode and event data recorder mode
- Support video resolution in NTSC/PA
- Turn on time less than 2 sec.
- Coverage range to 250m
- Frame rate 30fps and Transmission Delay 120ms

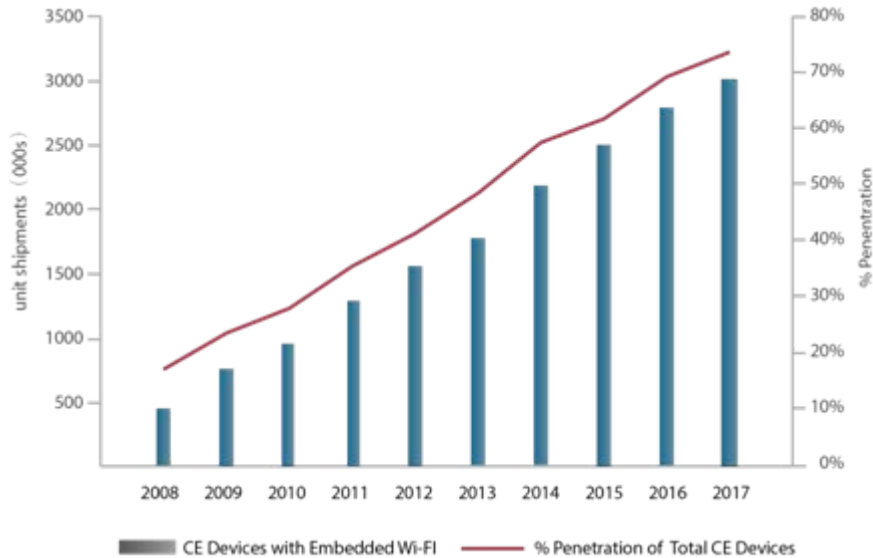
Wireless Drone System



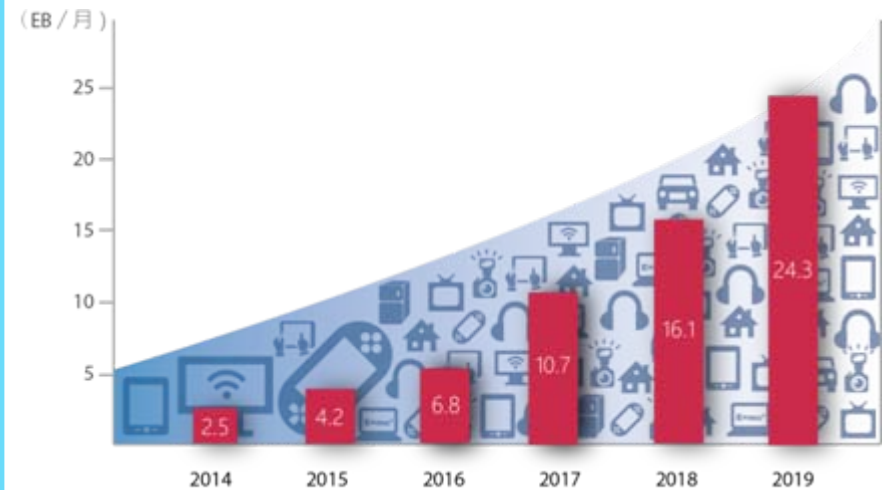
- Real time wireless audio transmission
- Integrated PA and LNA

Macro Business Drivers

WiFi Industry Growth



Global Data Throughput and Application Growth



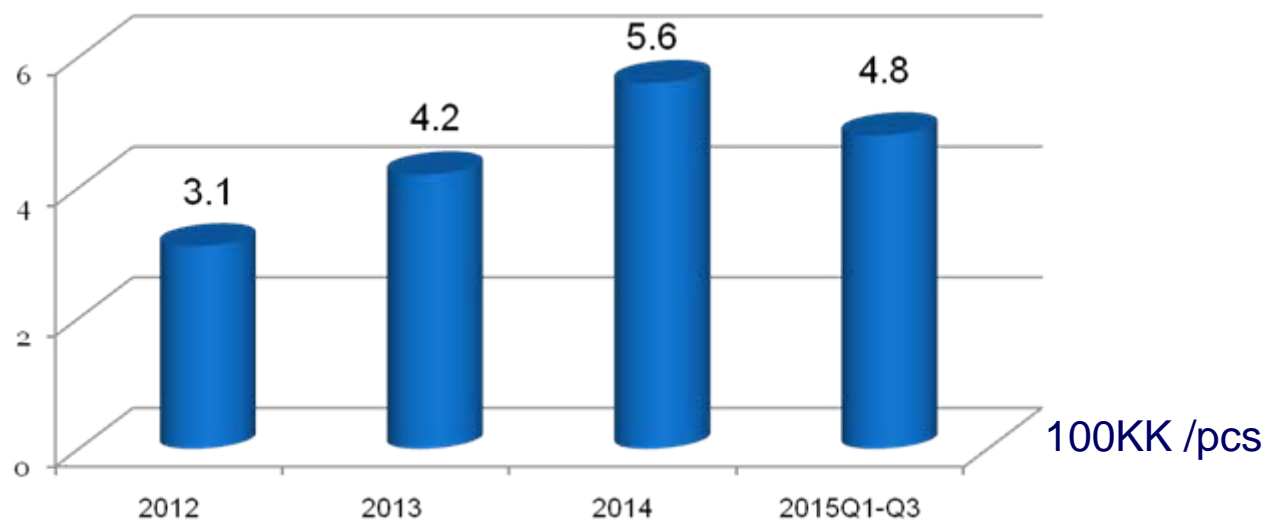
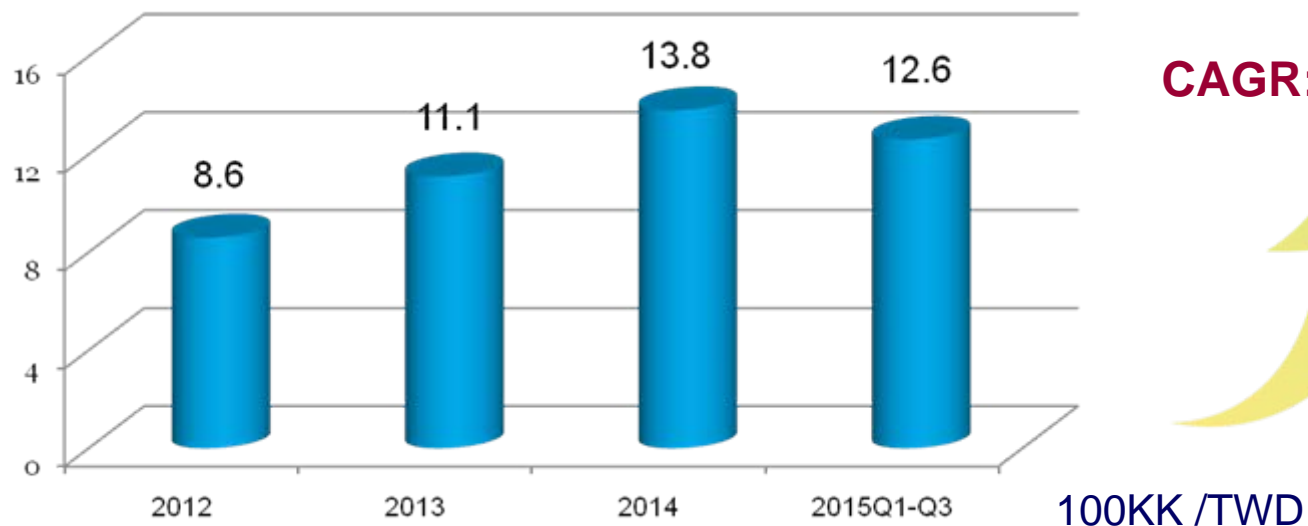
1 Exabyte (EB) = 10^9 GB

New Market Business Drivers



Financial Overview

Revenue and Shipment

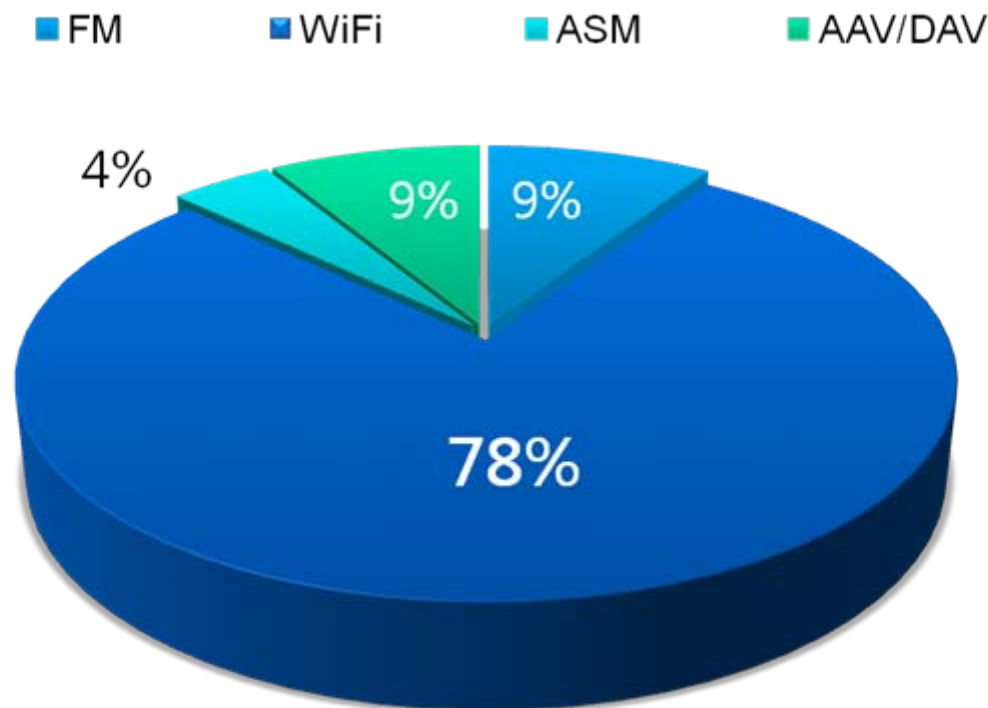


Net Income and EPS

(10K TWD)

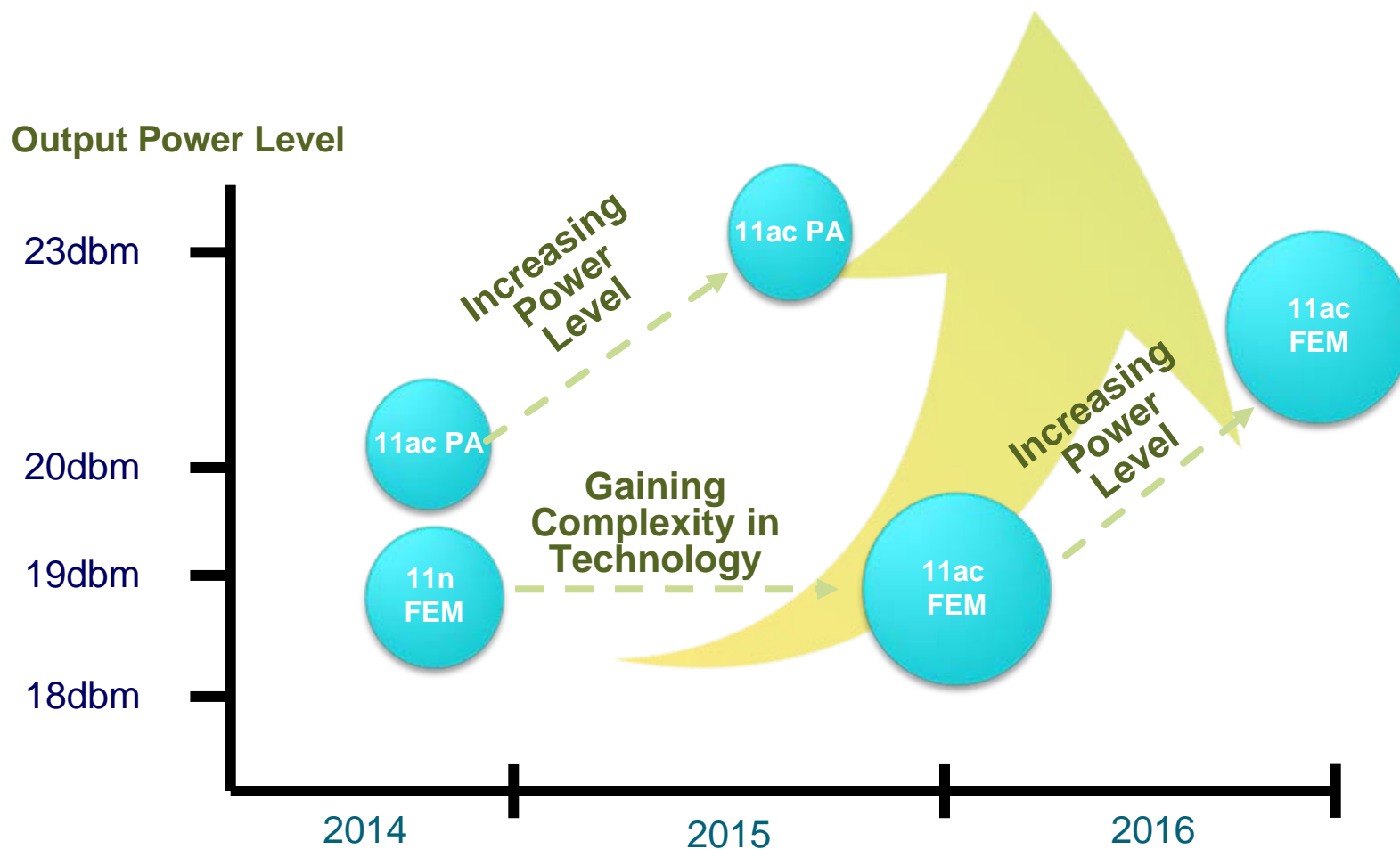


Revenue by Product – 2015Q1-Q3

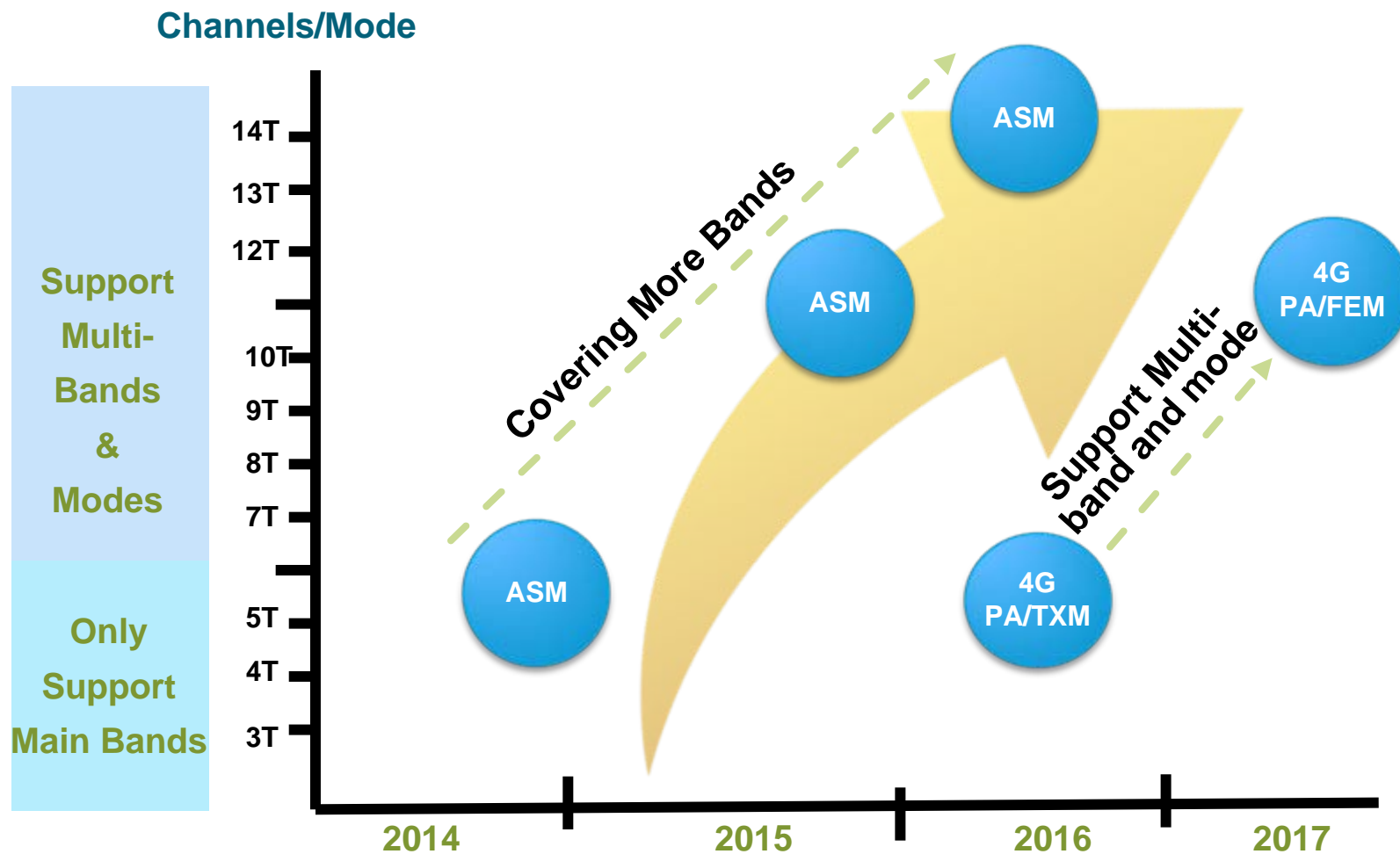


Product Roadmap

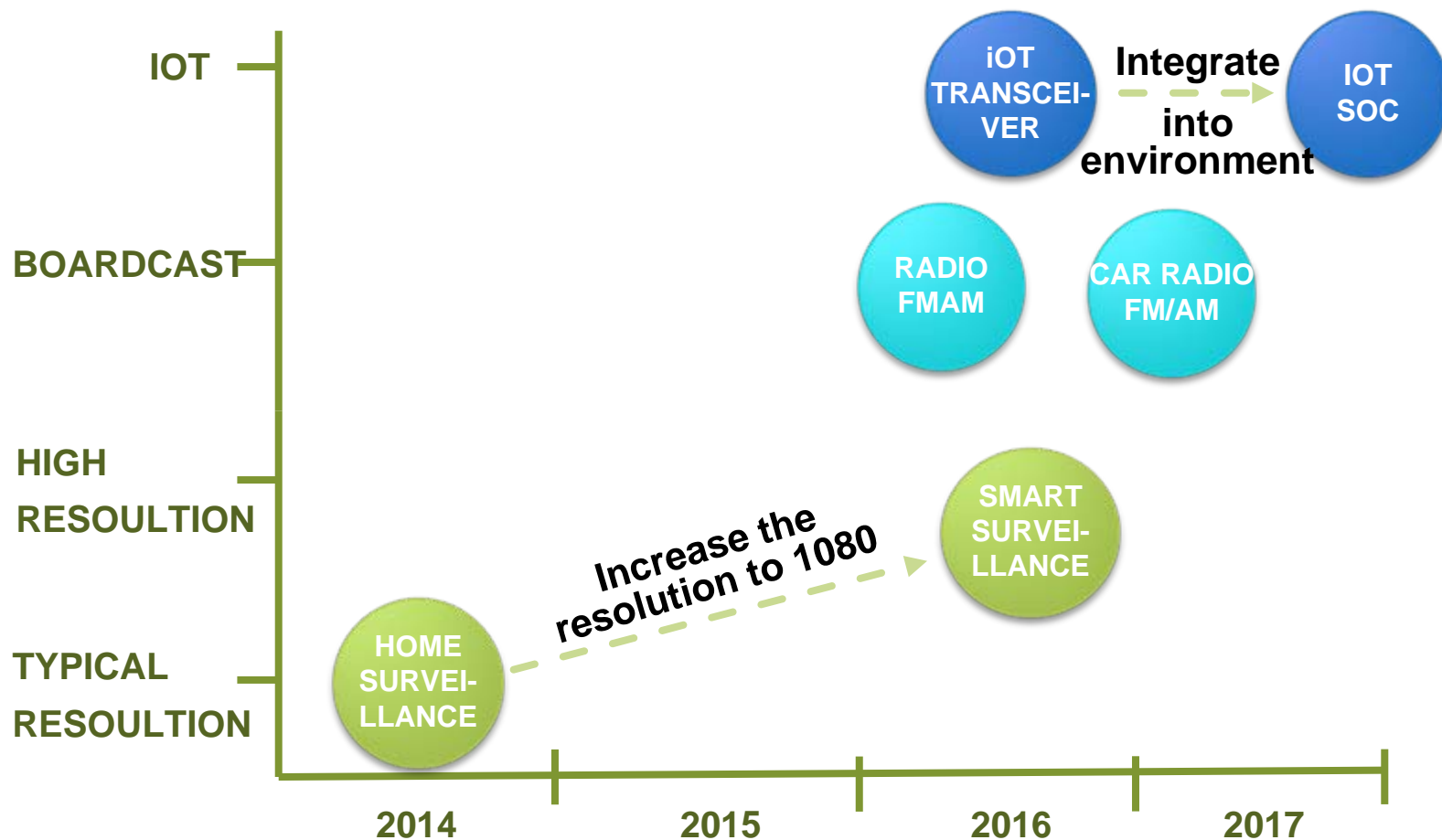
WiFi Product Roadmap



Cellular Product Roadmap



Audio and Video Transceiver Product





RichWave

The logo features the word "RichWave" in a bold, blue, sans-serif font. The letter "i" in "Rich" has a small black dot and three curved lines above it, resembling a Wi-Fi signal icon. The logo is centered within a white rounded rectangle that has a subtle drop shadow. Below the rectangle, the text "RichWave" is reflected in a lighter, semi-transparent blue color.