



中国唯一商用FPGA可变芯片供应商  
*The only commercial vendor of programmable IC in China*

# 结合CAP技术的可编程芯片创新之路

**Programmable IC: Innovation with CAP Technology**



董事长兼首席执行官：刘明博士  
Dr. Ming Liu, Chairman & CEO

Dec. 2014

Capital Microelectronics





A blue-toned background image featuring several glowing, translucent spheres composed of numerous small, bright points. One large sphere is centered in the middle ground, with others visible in the upper right and lower left corners. A horizontal yellow bar is positioned above the text box, and a dark blue bar is at the very top of the slide.

**Tough Challenges  
New Opportunities**

# History of FPGA Industry



**New trend, Big money,  
Long time, High return**

- Many have given up
- More have been trying

SOURCE: EE Times

*China Commercial FPGA Vendor: CME joined the big family from 2010*

# ROI Analysis for ASIC



ASIC / ASSP (65nm) Development Cost	\$55M
<i>20% of Revenue on R&amp;D</i>	
Revenue Target	\$275M
<i>\$10 to \$50 Device ASP</i>	
Unit Volume Req'd	<b>5Mu to 27Mu</b>

***Very Few High Volume Applications  
Justify ASIC / ASSP Development***

Source: Altera 2011 Q1 report

# Perception Changed...



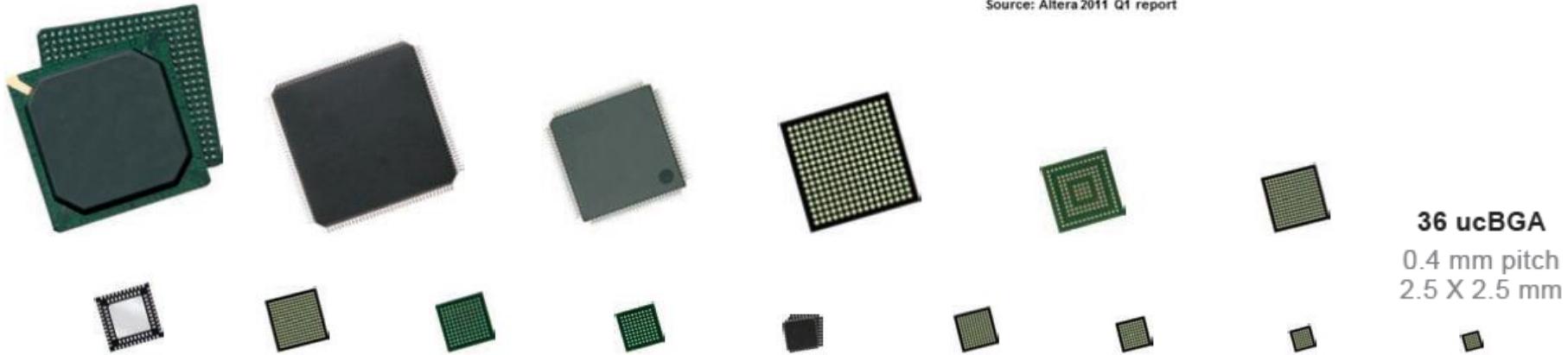
*Great for development*



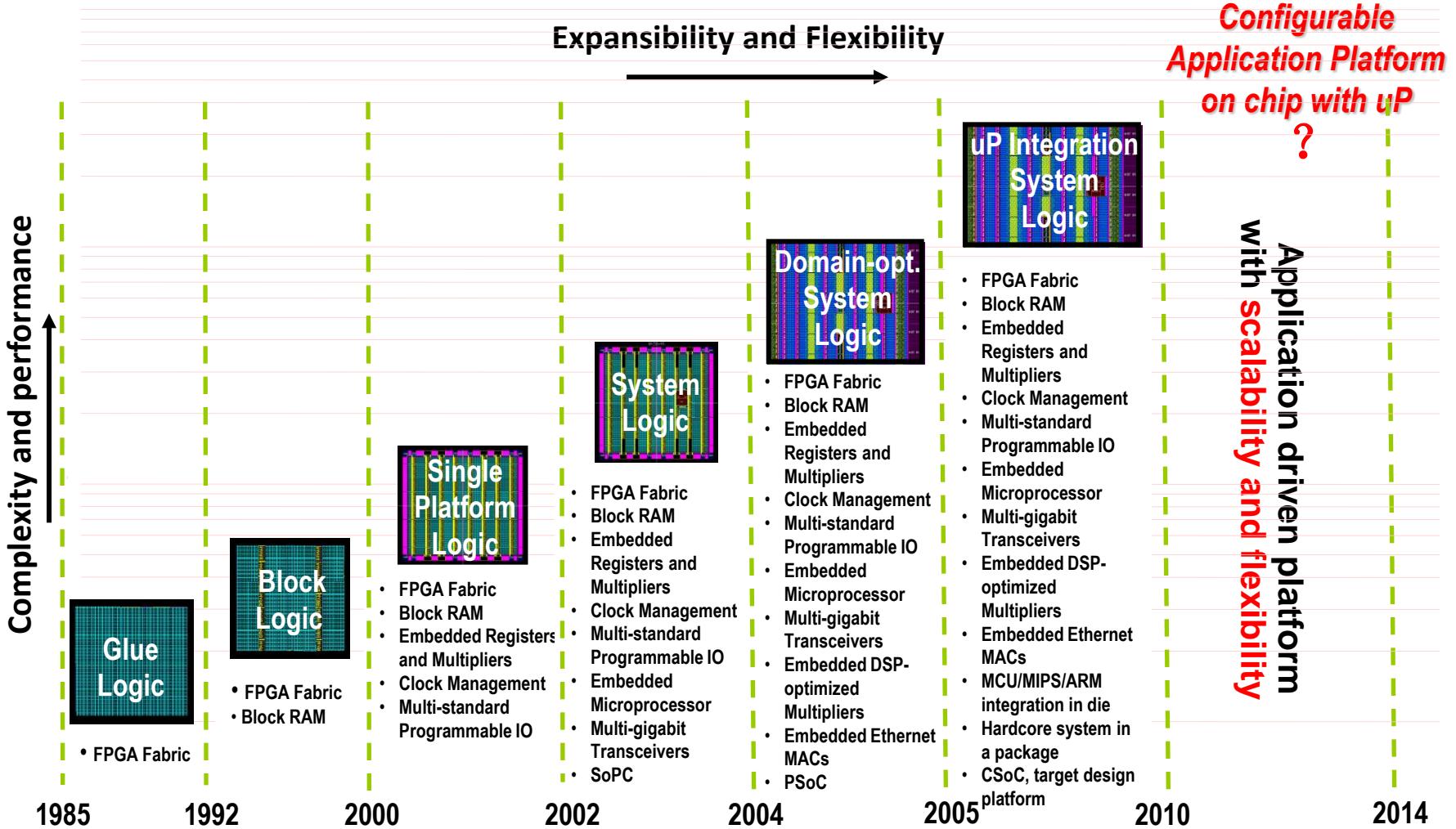
*Great for production*

*In reality, things have changed...*

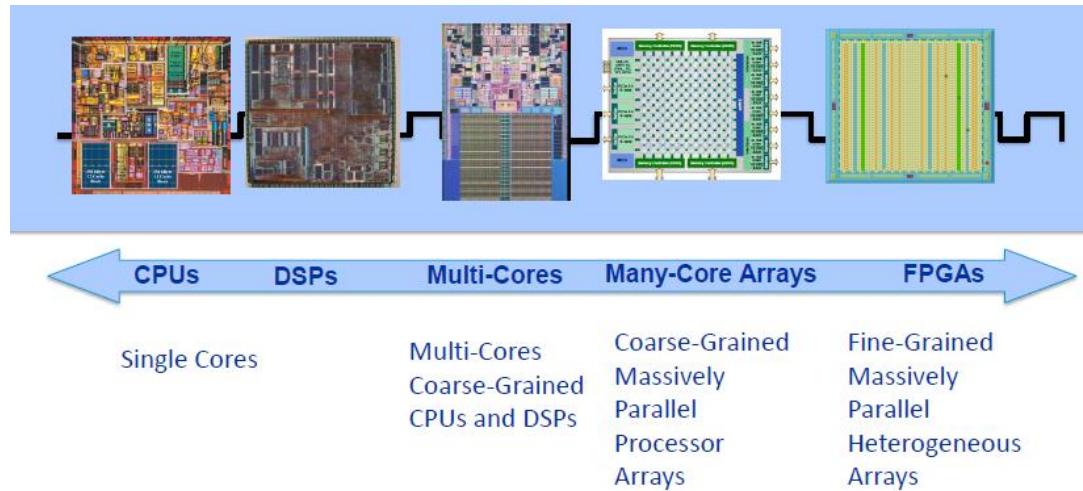
Source: Altera 2011 Q1 report



# FPGA Evolution

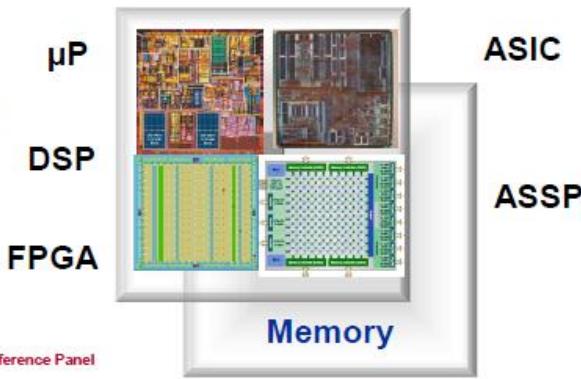


# SoC Development Trend



- From 2022 to 2032 all SoCs will be programmable, a combination of today's architectures

2022 – 2032

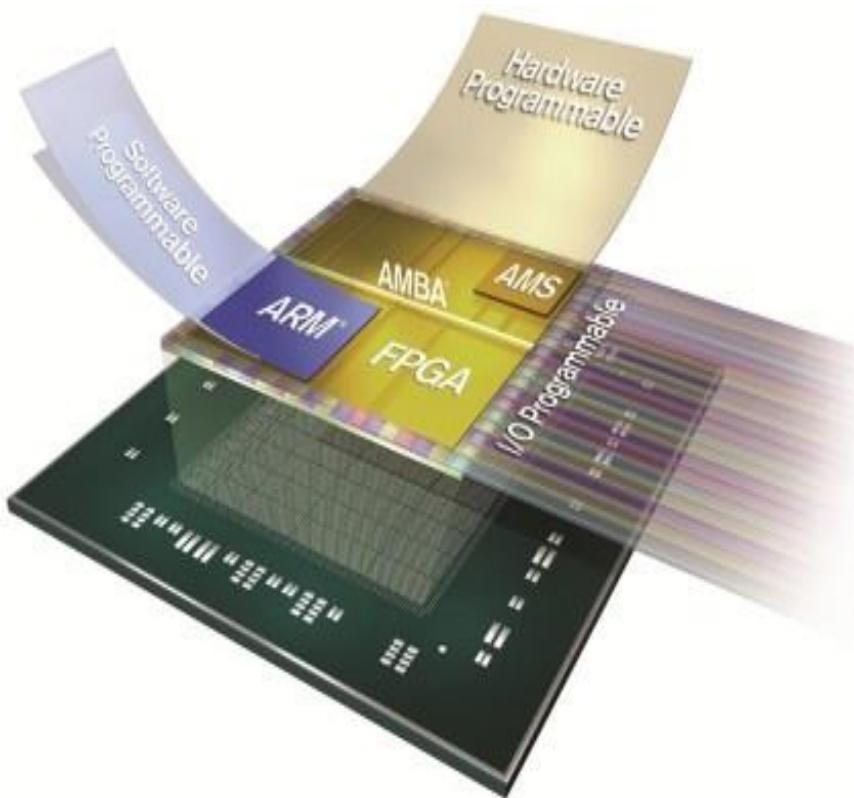


© 2012 Altera Corporation—FPGA 2012 Conference Panel

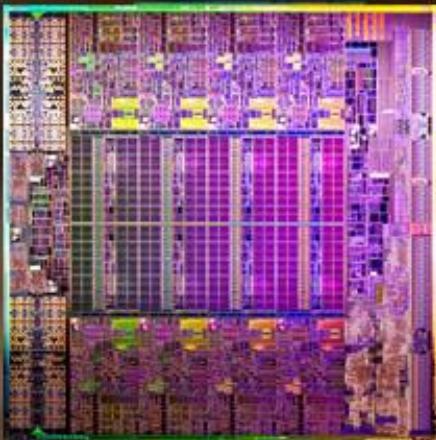
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ALTERA®

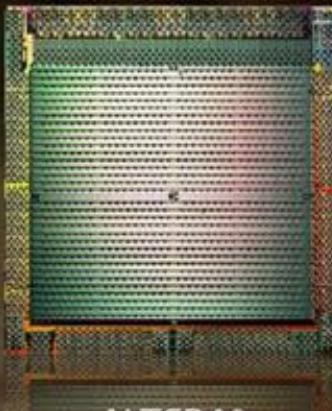
# ARM + FPGA



# uP + FPGA



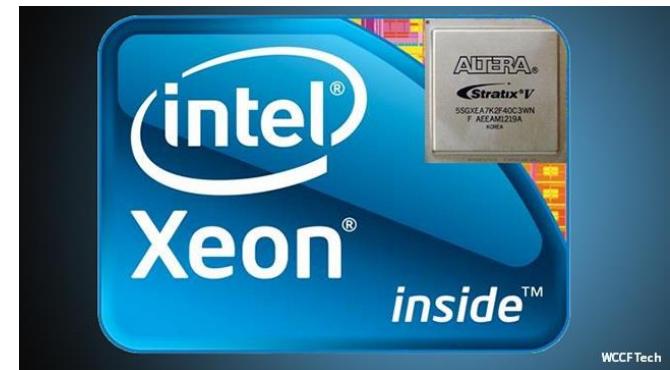
INTEL® ATOM™ Z600-XEON  
PROCESSOR SERIES



ALTERA®  
FIELD PROGRAMMABLE GATE ARRAY

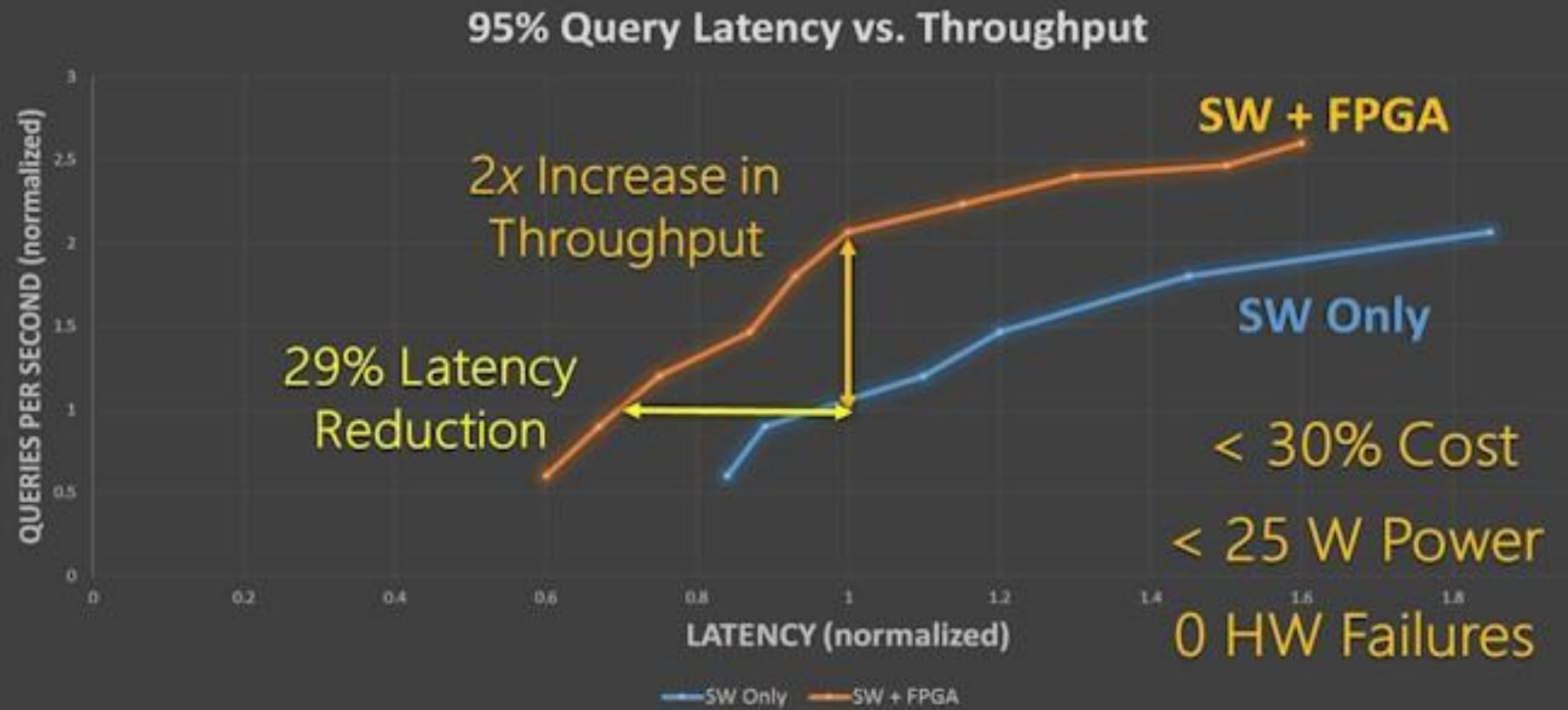
Intel Xeon  
Processor + FPGA

FPGAs improved performance by 10X, 20X, or 30X, while moving FPGA core into the Xeon package, it will double the performance again



# Bing Results with FPGAs

1,632 Servers with FPGAs Running Bing Page Ranking Service (~30,000 lines of C++)



Source from Microsoft's FPGA announcement at ISCA 2014



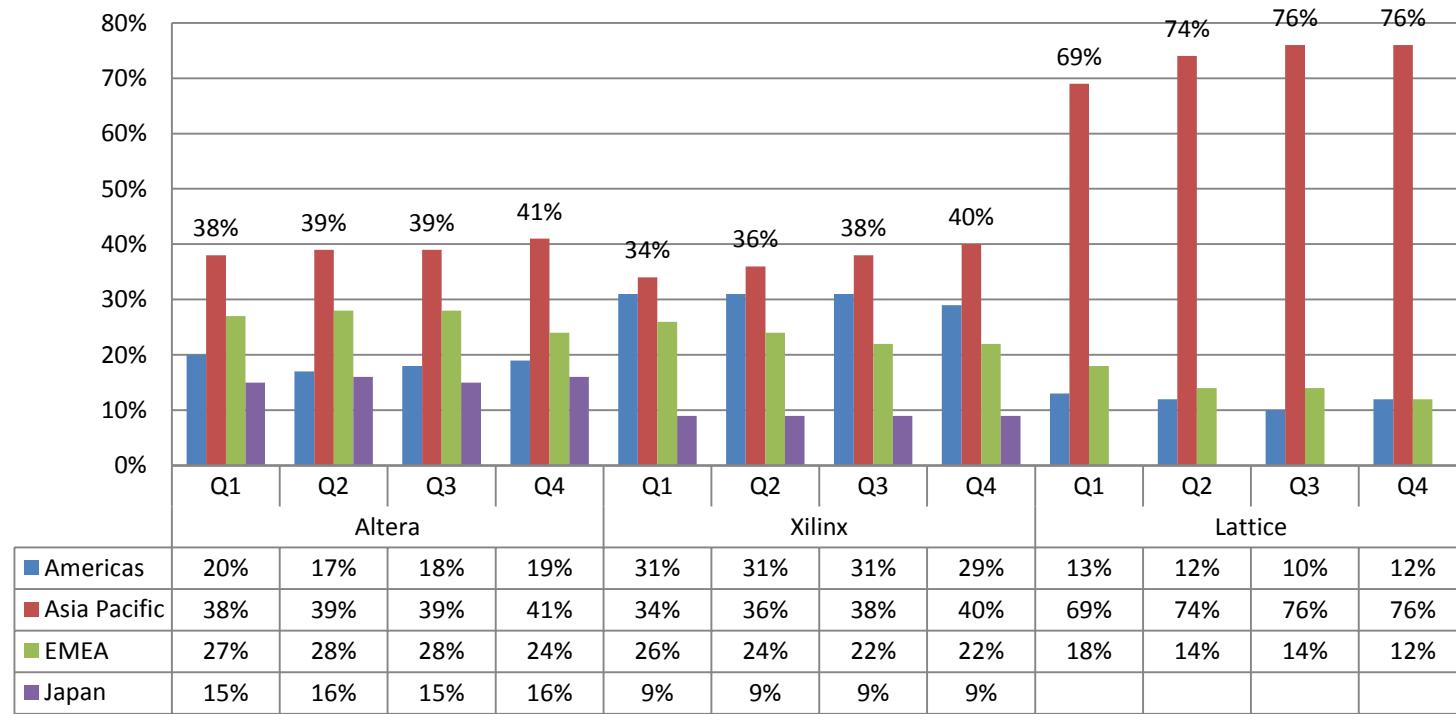
A background graphic featuring a dark blue gradient with several glowing, semi-transparent spheres of varying sizes. These spheres are interconnected by thin, glowing lines, creating a network or molecular structure effect. The spheres appear to be composed of numerous small, bright dots.

**Why CME?**

# Local Market Needs Domestic Vendor

FPGA revenue in Asia/Pacific counted for 38%, 40%, and 70%, respectively, for Xilinx, Altera, and Lattice in 2013

Revenue Percentage by Geography (CY2013)



# Traditional FPGA Market Segments



# Emerging FPGA Market Segments



LED Display



Cloud—Big Data



Smart Home



4G-LTE Network



Smart City



Wearable

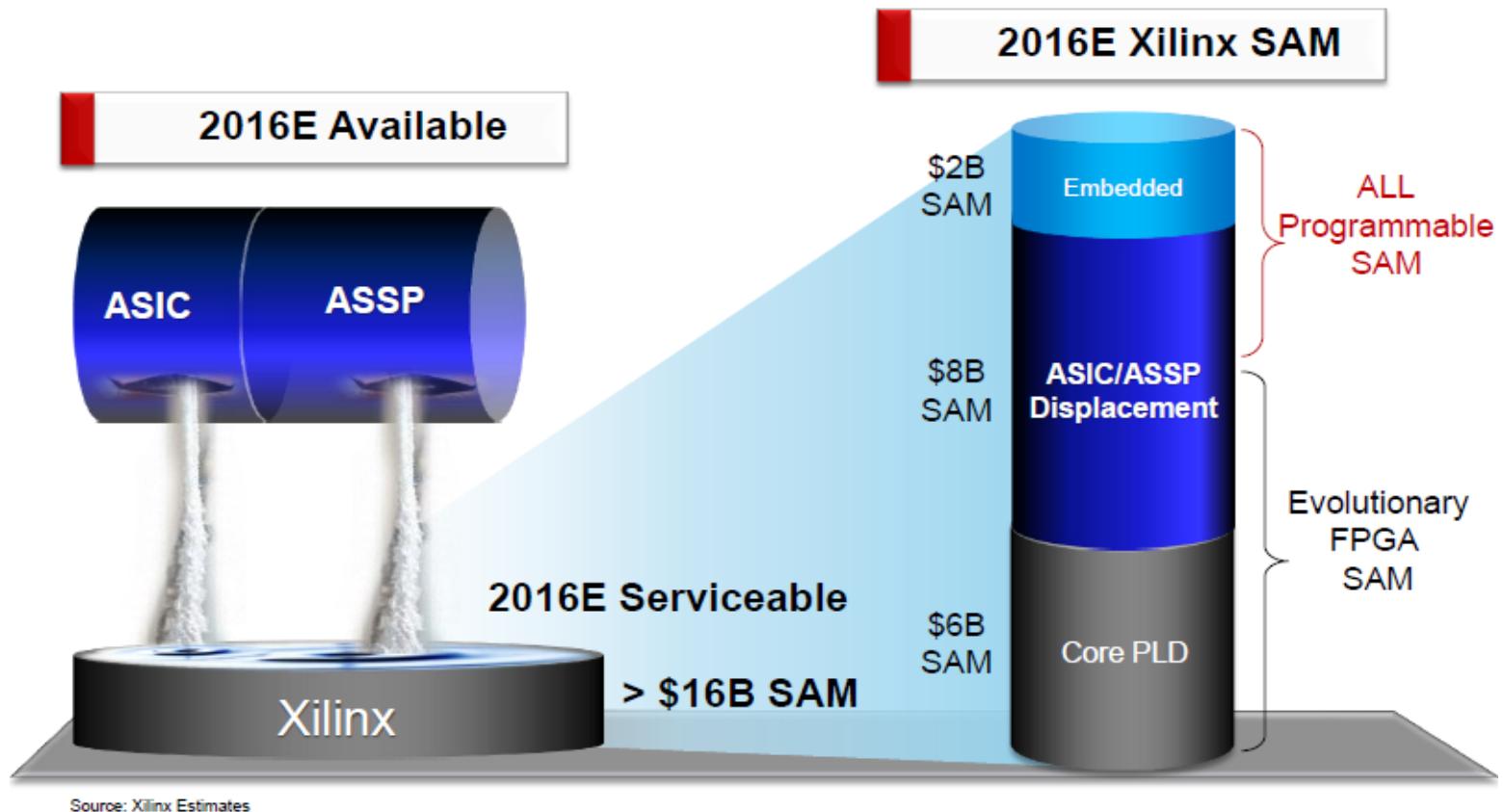
Smart Phone



IOT

# Emerging SAM

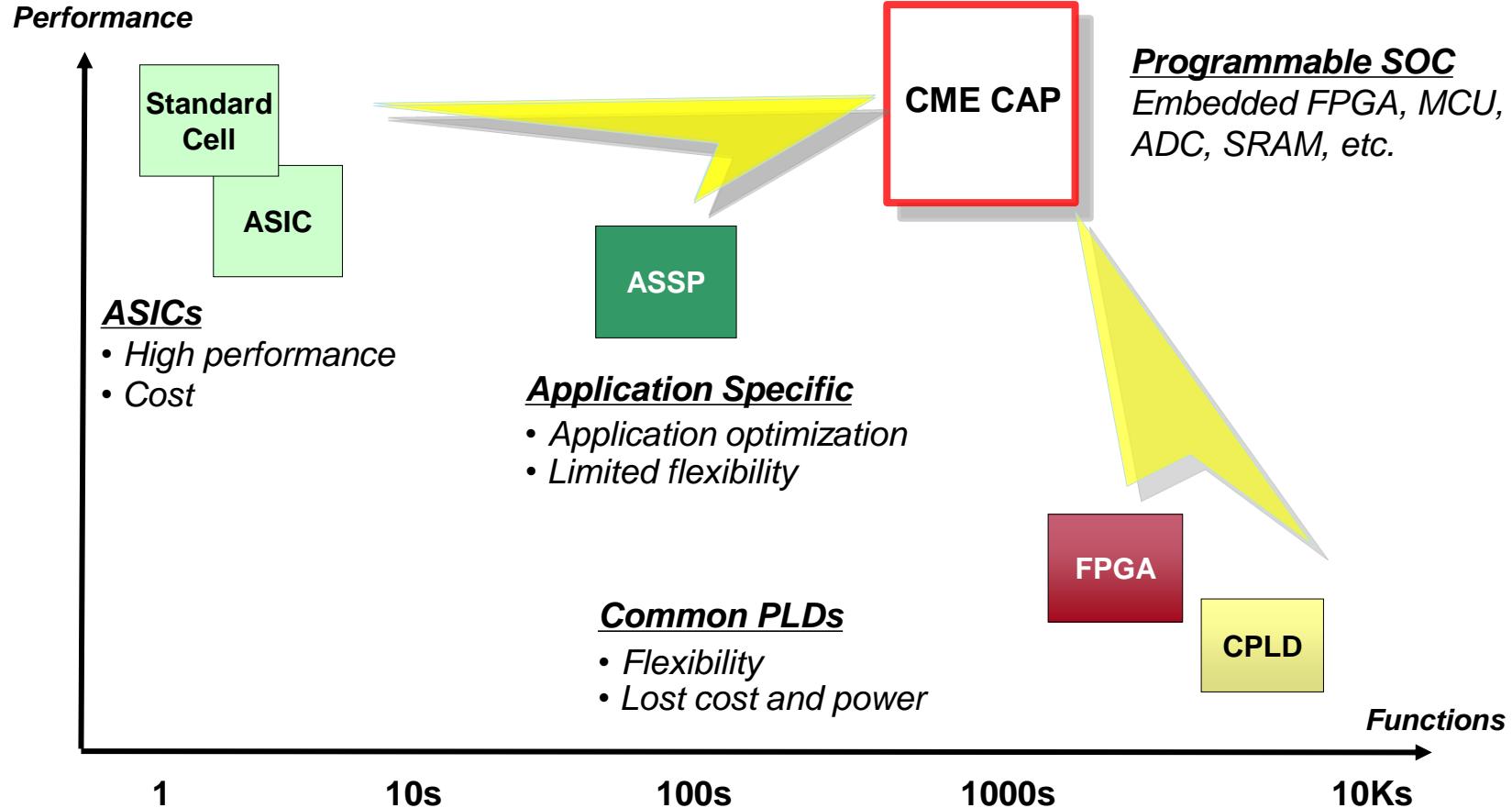
Predict all of SOC would have programmable functions from 2022 to 2032



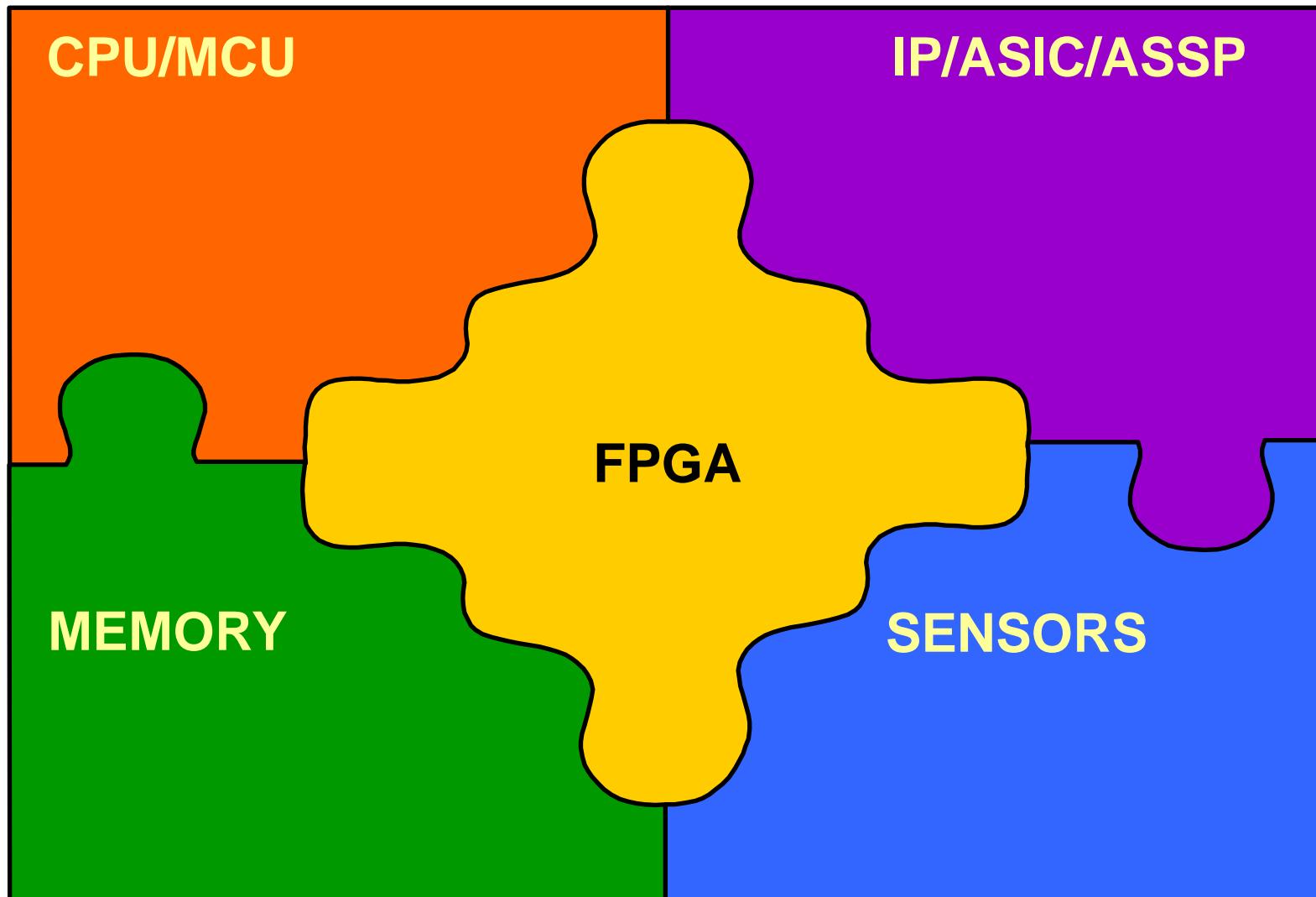
# FPGA Market Growth Forecast in China



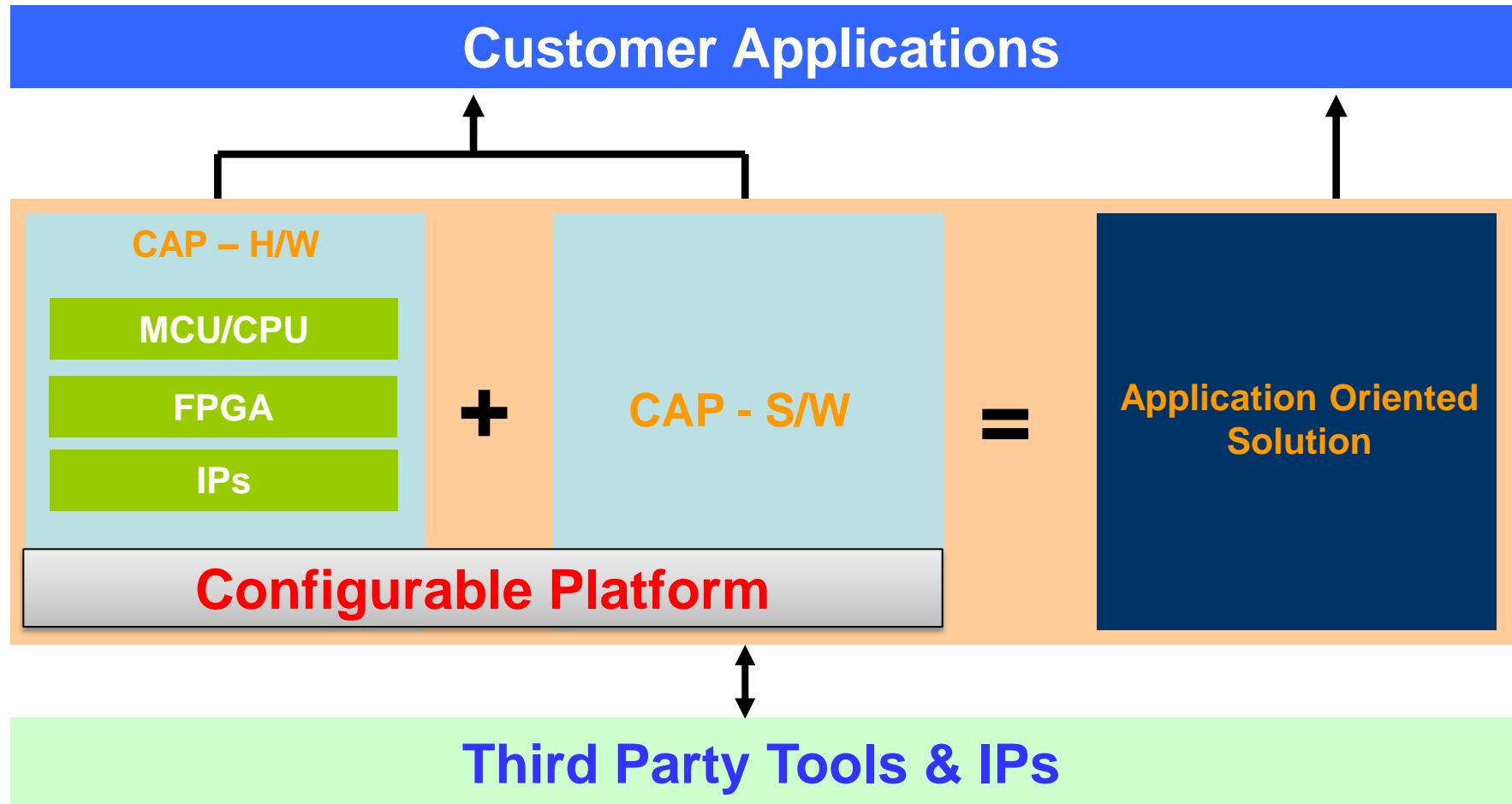
# CAP — Configurable Application Platform



# Seamless Integration

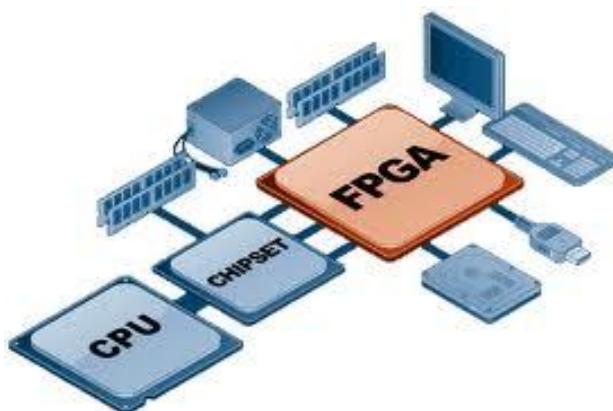


# CAP Ecosystem



# 4 CAPs in CME

- **CAP products** — Configurable Applications Platform
  - ✓ Programmable SOC with embedded FPGA, MCU, ADC, SRAM, ASIC cores
- **CAP features** — low Cost, wide Adaptability, high Performance
  - ✓ Competitive advantage
- **CAP culture** — Communication, Accountability, Persistency
  - ✓ Hybrid Chinese and Western corporate culture
- **CAP relationship** — Complementary, Alliance, Prosperity
  - ✓ Strategic partnership with Win-Win business model



# 4 Critical Factors for CME Success

**Team** — Rapidly growing CME team welcomes more talents to join: marketing and sales executive, sales representatives, FAEs, analyst, experienced engineers in IC design, software development, system applications, etc.

**Market** — Largest FPGA market provides great opportunities

**Technology** — 165 patents, 4 families of products

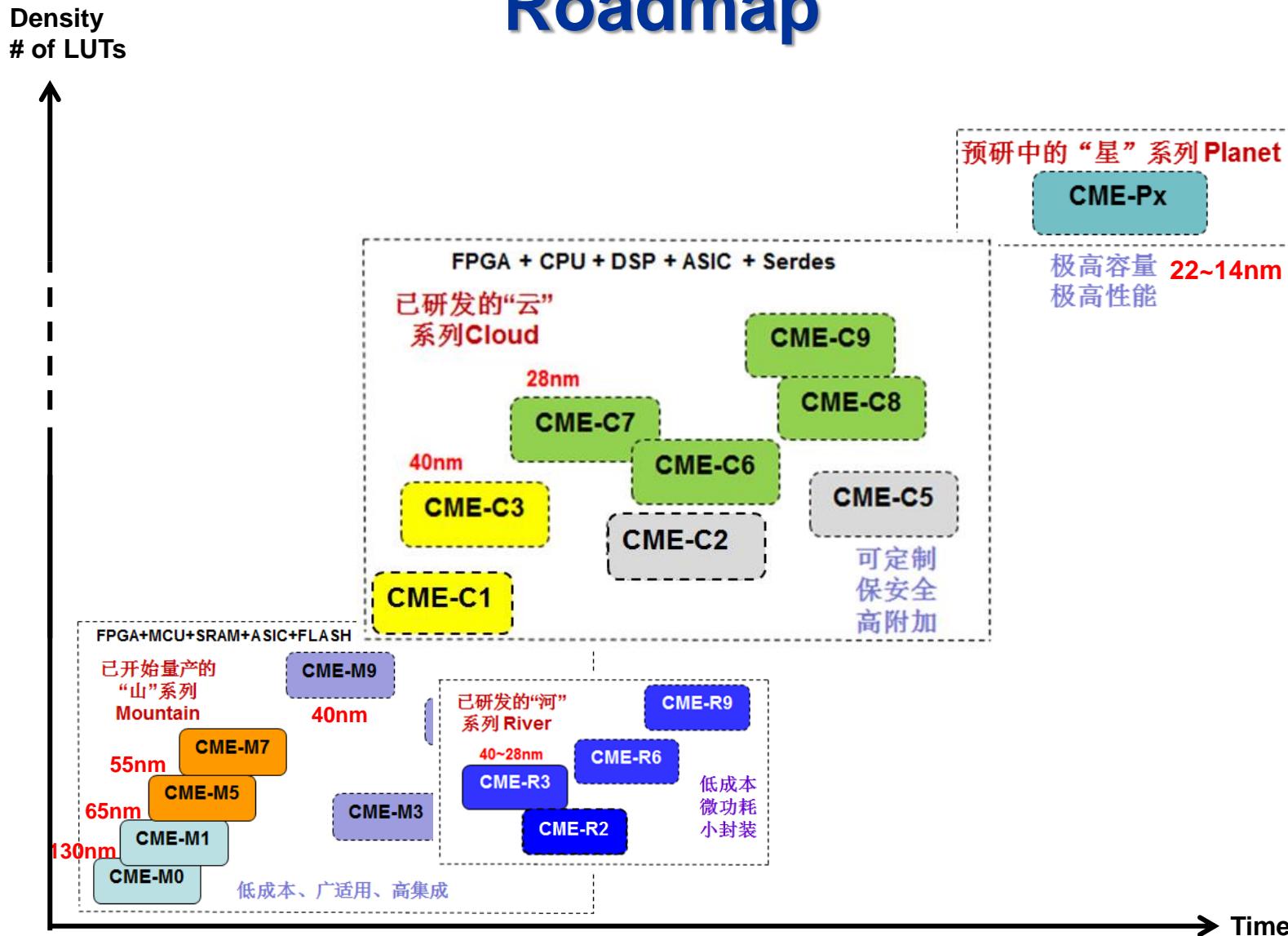
**Funding** — More funding opportunities in China



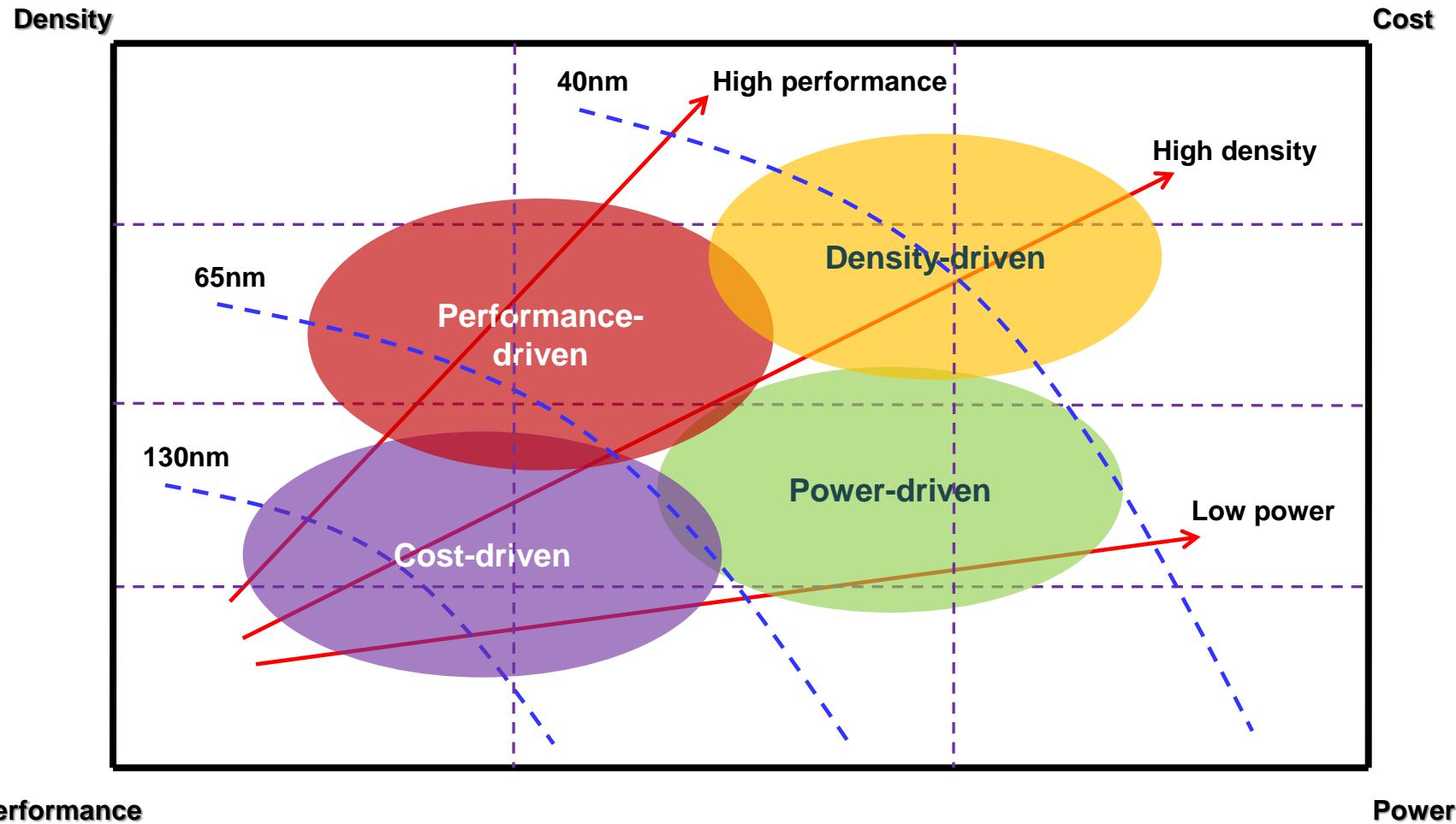


## Products & Applications

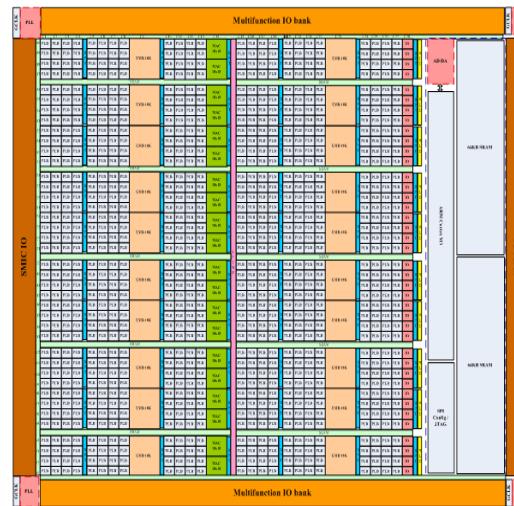
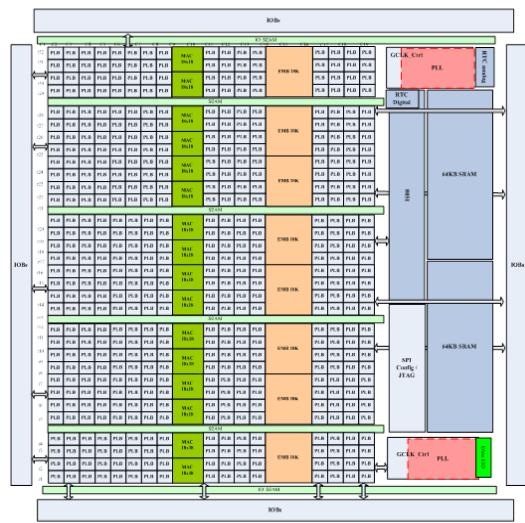
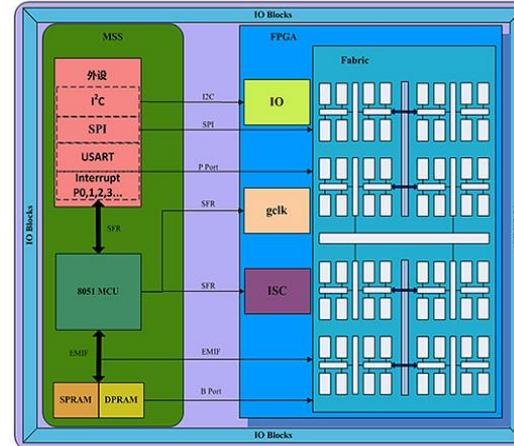
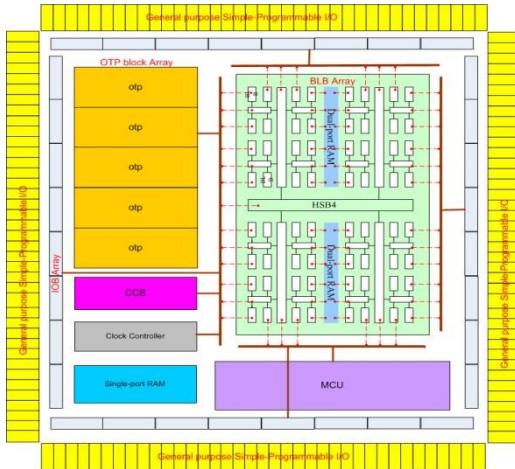
# Roadmap



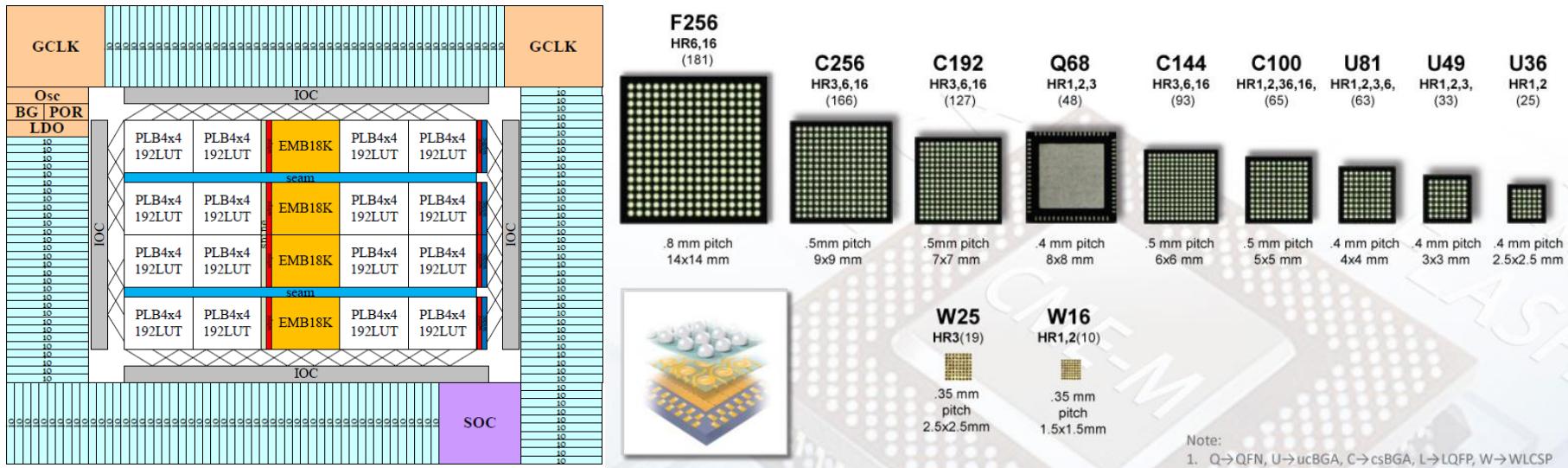
# Orientation & Target



# Mountain Family



# River Family



# Panel Display



芯随心动  
开创IC设计新时代

以灵活有效的独特设计和创新应用  
帮助客户提高其系统产品的竞争力

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文字 

图片 

画图 

动画 

环移 

键盘 

时钟开 

时钟关 

 返回



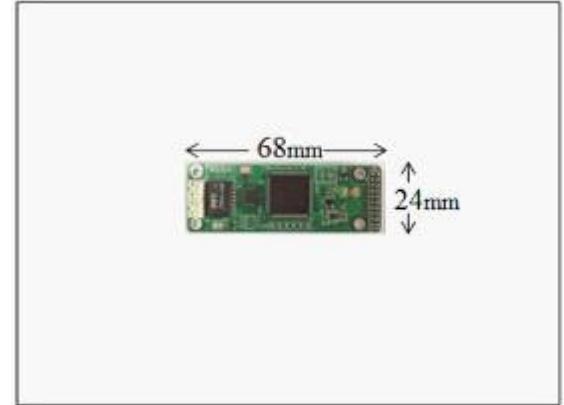
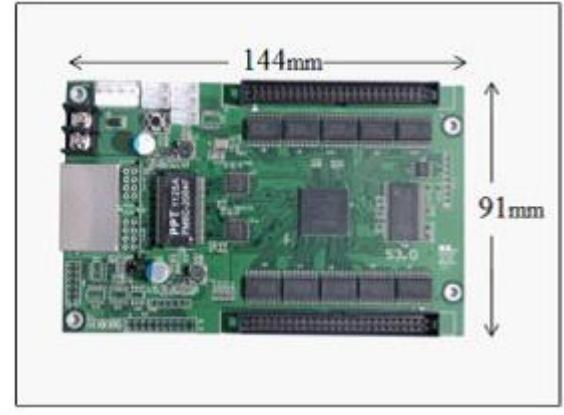
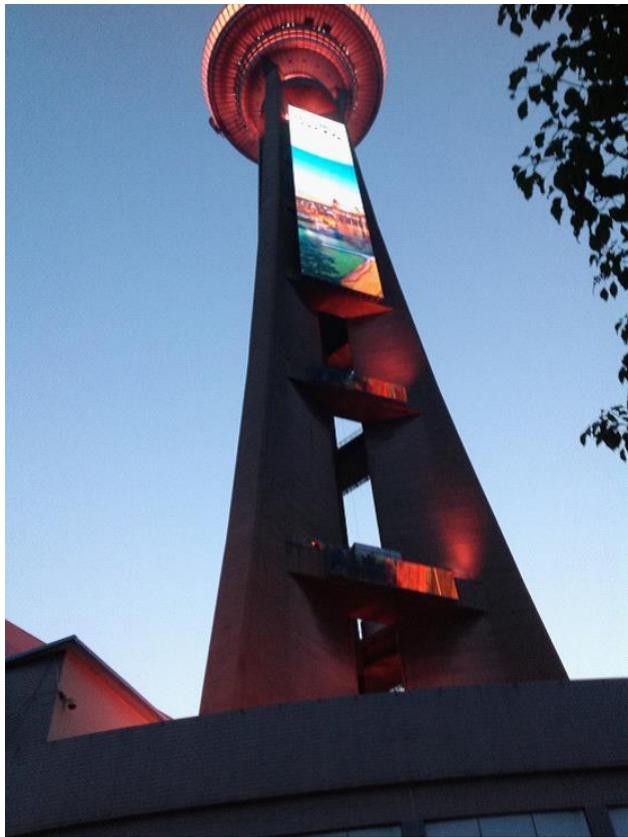
# Smart Home



# Full Color LED Display

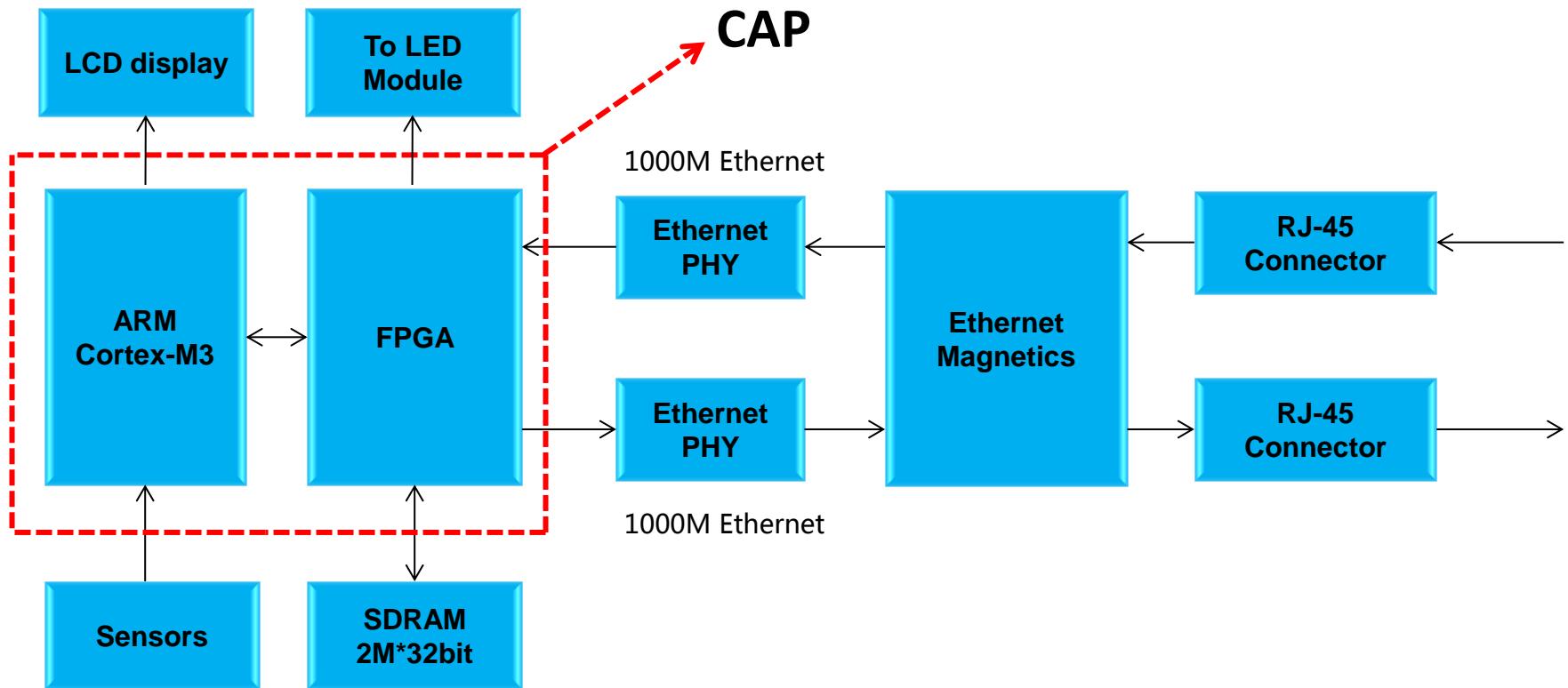


# Youth Olympics in Nanjing



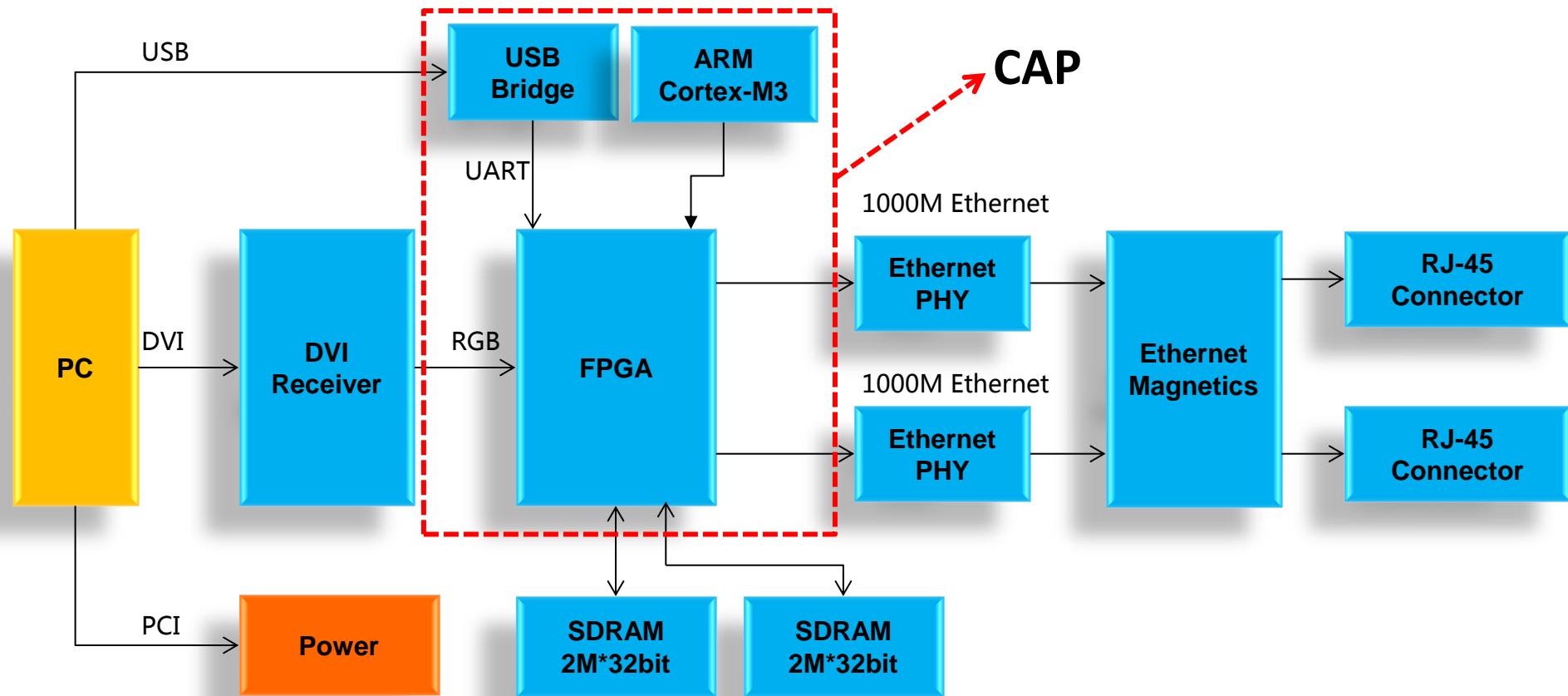
# RX Solution

## Sync LED Display – RX Card

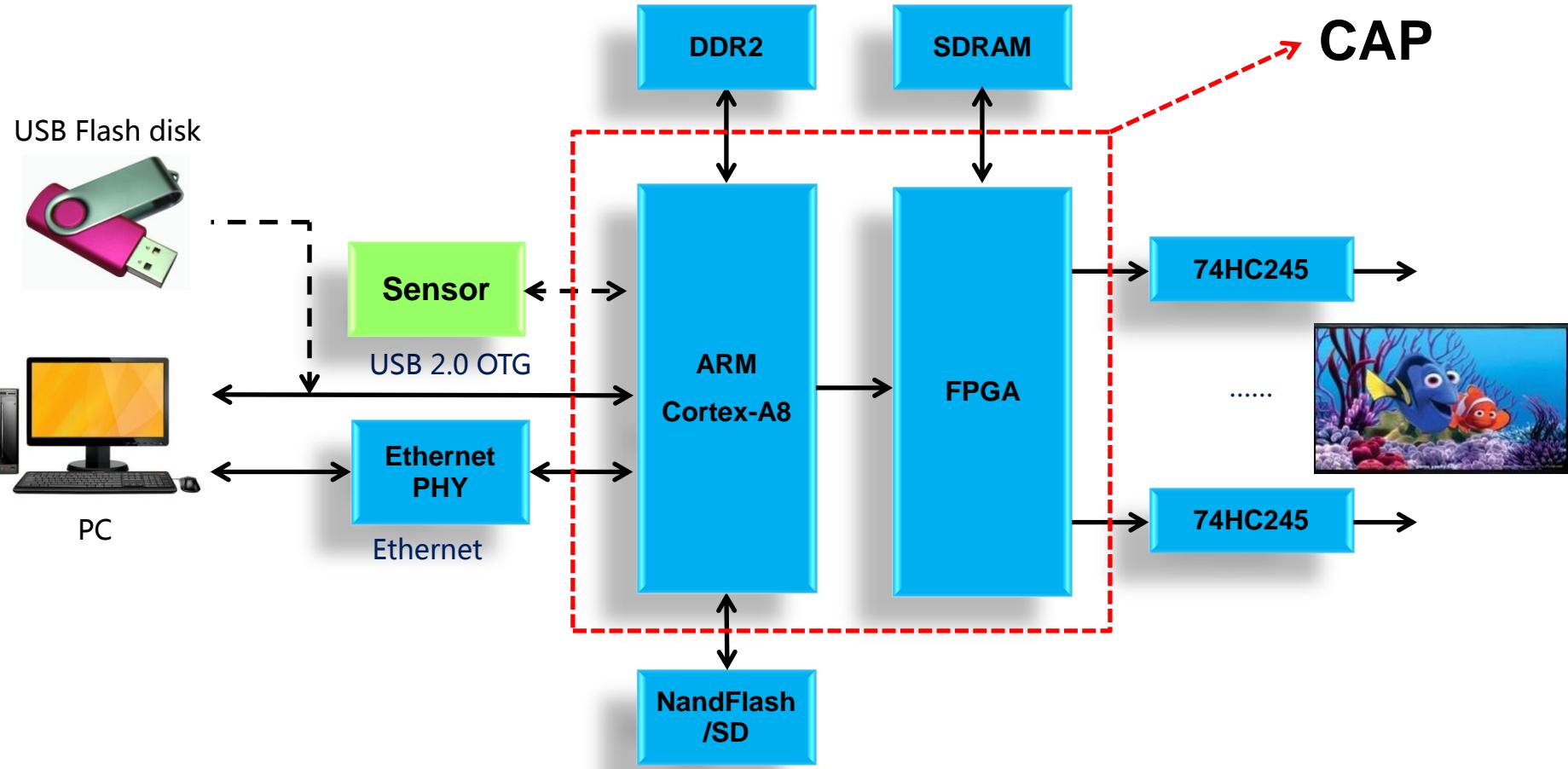


# TX Solution

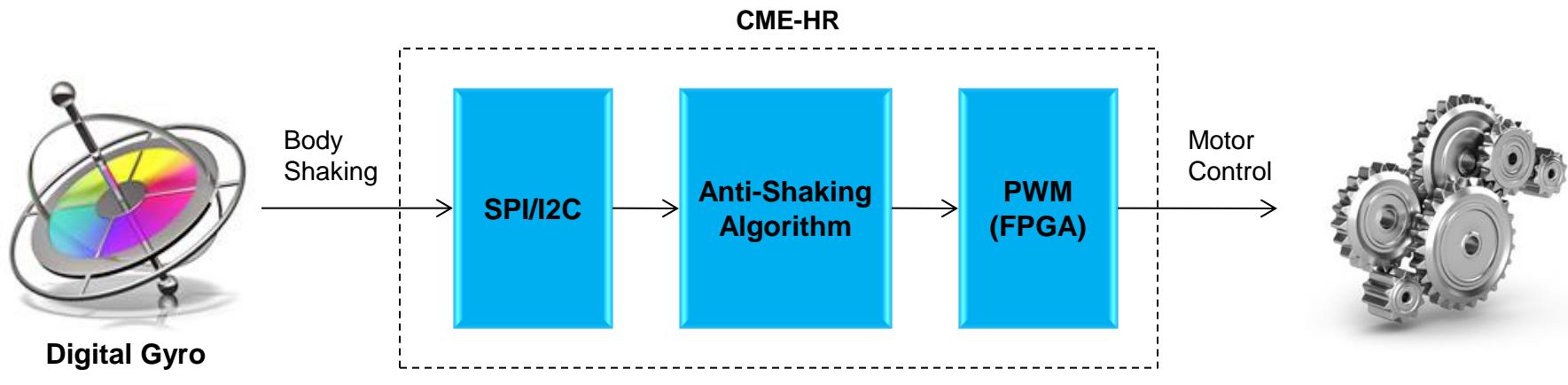
## Sync LED Display – TX Card



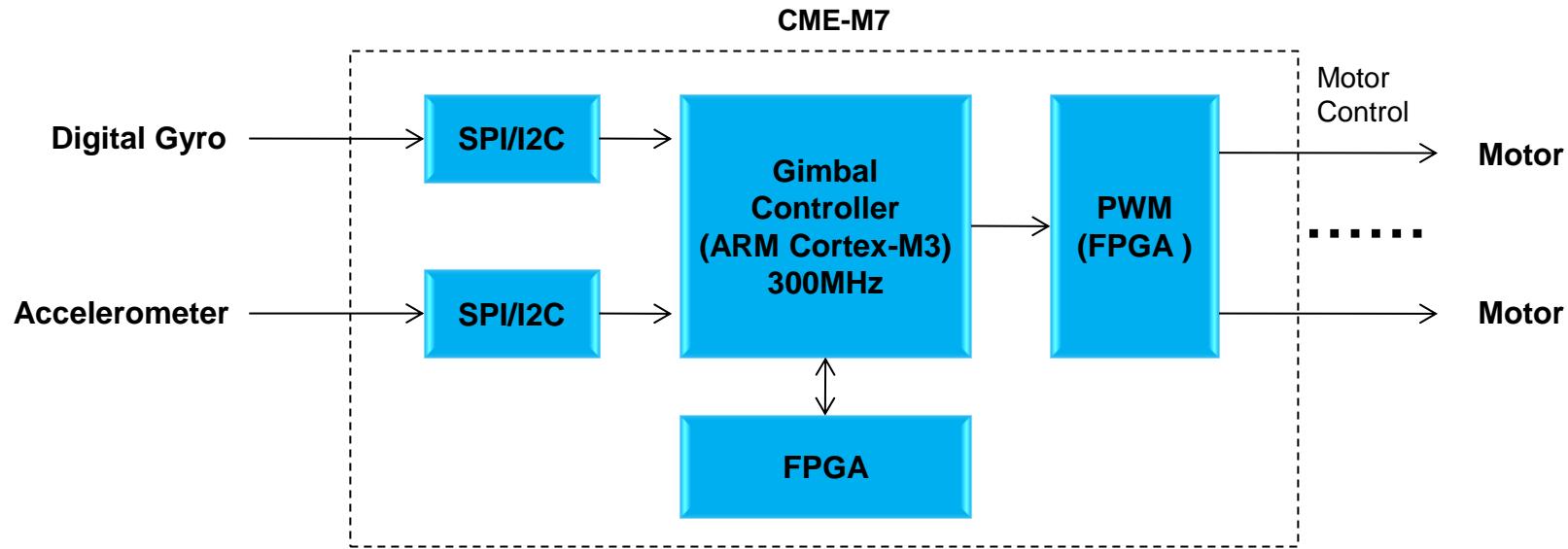
# Async LED Display Solution



# Self-Stabilization System



# 3-Axis Head System

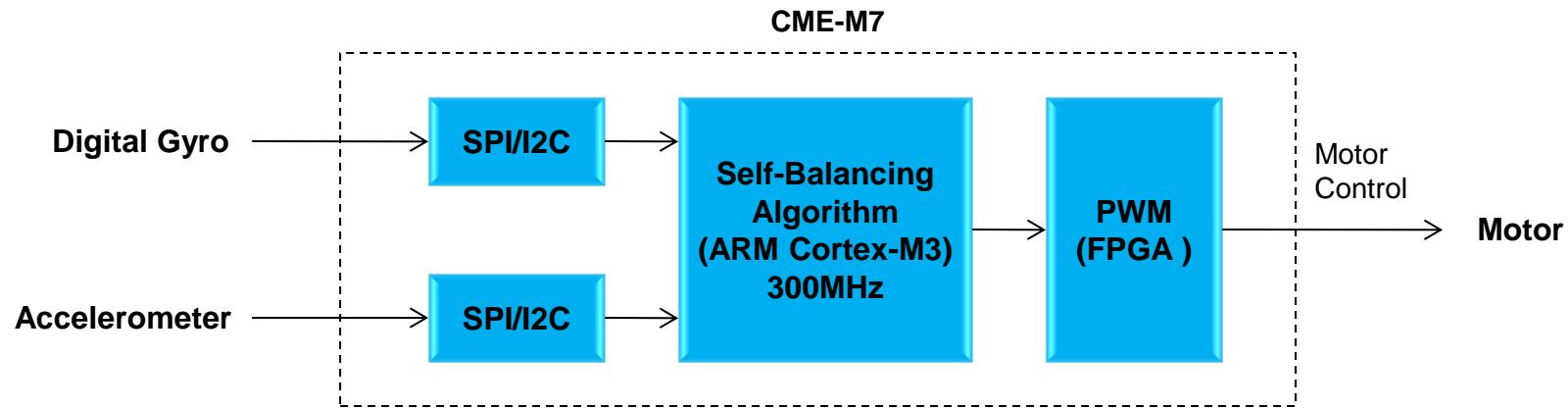


Chicken Head Tracking

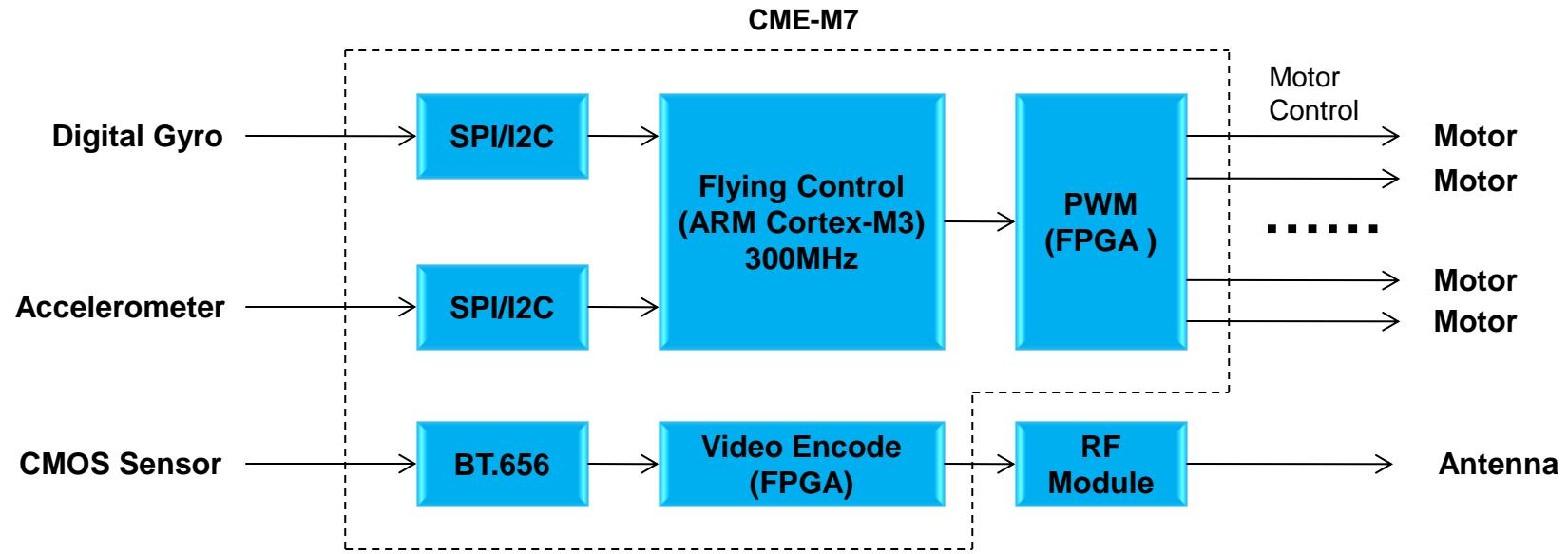


3-AXIS Professional Gimbal

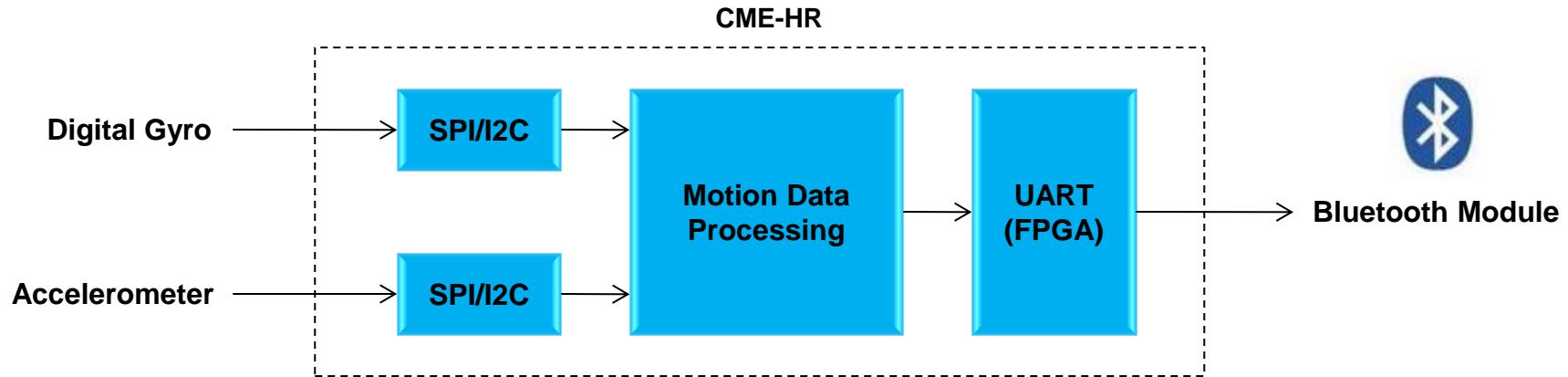
# Balance Car



# Drone



# Somatosensory Games





## CME Activities

# River Family HR3 Press Conference



# Mountain Family M7 Press Conference



# CME-FPGA Day Events



## CME FPGA DAY





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# Thanks

