



來揚科技股份有限公司
Lyontek Inc.

www.lyontek.com.tw



Company Profile

Date: 2023/3/14

Ver: T23_03

Founded: Nov, 2003

Headquarter: Hsin-Chu, Taiwan

Capital: NT\$200M (US\$6.6M)

Company website: www.lyontek.com.tw



Lyontek is a fabless semiconductor company that offer specialty memory include Asynchronous Low Power SRAM / High Speed SRAM, Low pin count RAM, Memory IP for the following market: Communication, Industrial, Medical, Automotive, and Digital Consumer/PC Peripherals.

We also design high performance analog Audio Amplifier for consumer market.

We have been a committed long-term supplier for our products no matter your demand is small or large , even through periods of tight manufacturing capacity.

Foundry Partners : Global Foundries, HHGrace, PSC.

- *Long Term Supply*
 - . *Stable delivery and quality – meet industrial customers need*
 - . *Diverse end market application to reduce the impact from market fluctuation*
- *Long Product Lifetimes*
 - . *Flexible Product – Fewest mask to provide most product*
 - . *Reduce development cost – Stable Financial*
- *Low System cost by New Technology*
 - . *Low pin count RAM – High density low cost*
 - . *SPI SRAM – super low power consumption*

2003Y Company approved in NCTU Innovation Incubation Center, Hsin –Chu.

*2005Y Succeeded to get the **SONY Green Partner** Certification.*

2006Y Passed ISO9001/14001 Certification.

2007Y Start to build Analog product line – Audio amplifier

2010Y Accumulated SRAM shipment quantities over 50Mpcs.

2011Y Passed QC080000 Certification.

*2013Y Accumulated SRAM shipment quantities **over 100Mpcs.***

2014Y Succeed to develop 10ns 16M with ECC SRAM.

2016Y Succeed to develop 90nm 64M Low Power SRAM.

2017Y Expanded RAM product line, Serial PSRAM

2018Y Expanded NVSRAM product line, 1M

2022Y Developing Low power Serial SRAM



Lyontek 100M SRAM Shipment

Dear Customers and Partners:

Lyontek had achieved the milestone of SRAM shipment accumulated 100M units on Mar, 1st. It is our great honor to share the achievement with every dear partners. We sincerely thank for your long-termed efforts and promotions. By these efforts, much more customers have chosen Lyontek products and service. Lyontek can not reach this important milestone without your efforts.

Looking into future, Lyontek admits to keep the principle of long-termed supply and to offer more excellent products and service to win the trust from more customers. Finally, let's move forward to the next "100M" milestone together.

“億”義非凡，來揚飛揚

Lyontek President

Mar. 1st, 2013





<i>Industrial</i>	<i>POS</i>	<i>Communication</i>	<i>Consumer</i>	<i>Automotive</i>	<i>Medical</i>
<i>PLC</i>	<i>POS</i>	<i>Web Storage Management</i>	<i>GAME</i>	<i>Sensing Module</i>	<i>Dialysis Equipment</i>
<i>Power Control</i>	<i>E-POS</i>	<i>VOIP</i>	<i>Audio</i>	<i>Entertainment System</i>	<i>Medical Instrument</i>
<i>Factory Automation</i>	<i>IC Card Reader</i>	<i>Telephone Equipment</i>	<i>E-education Machine</i>		
<i>Weighting System</i>	<i>Barcode Scanner</i>	<i>Walkie Talkie</i>	<i>Calculator</i>		
	<i>POS Printer</i>	<i>Base Station</i>	<i>LED Display</i>		
<i>Motor Control</i>	<i>cash exchanger</i>	<i>B.B.CALL</i>	<i>E-book</i>		
<i>Saw Machine</i>	<i>Coffee machine</i>	<i>VOIP</i>			
<i>Electrical Recorder</i>	<i>ETC</i>	<i>GPS Module</i>			
<i>Server</i>	<i>Vending Machine</i>	<i>PON</i>			
<i>Test Instrument</i>	<i>Washing Machine</i>	<i>Transportation Tracking recorder</i>			
<i>Security system</i>	<i>Gasoline Machine</i>				

SRAM Marketing Policy





Widely SRAM Product Guide

Density	Configuration	Power	Speed (ns)		PKG
64K	8Kx8	2.7-5.5V	35/55/70	Low power	28pin STSOP(8*13.4)/SOP/DIP
256K	32Kx8	2.7-5.5V	35/55/70	Low power	28pin STSOP(8*13.4)/SOP/DIP
		3.3V/5V	12/15/20	High speed	28pin STSOP(8*13.4)/SOJ
1M	128Kx8	3.3V/5V	35/55/70	Low power	32pin STSOP(8*13.4)/TSOPI(8*20)/SOP/PDIP/Dice
		3.3V/5V	20/15/12	High speed	32pin STSOP(8*13.4)/TSOPI(8x20)/SOJ
	64Kx16	3.3V	35/55/70	Low power	44pin TSOP-II, 48ball BGA/Dice
		3.3V	10/20	High speed	44pin TSOPII, 48ball BGA
2M	256Kx8	3.3V/5V	55/70	Low power	32pin STSOP(8*13.4)/SOP/Dice
		3.3V/5V	10/20	High speed	44pin TSOPII
	128Kx16	3.3V/5V	55/70	Low power	44pin TSOP-II, 48ball BGA/Dice
		3.3V/5V	10/20	High speed	44pin TSOPII
4M	512Kx8	3.3V/5V	55/70	Low power	32pin STSOP(8*13.4)/TSOPI(8*20)/SOP/TSOPII/Dice
		3.3V/5V	8/10/20	High speed	44pin TSOPII
	256Kx16	3.3V/5V	55/70	Low power	44pin TSOP-II/48ball BGA
		3.3V/5V	8/10/20	High speed	44pin TSOPII
8M	1Mx8	3.3V/5V	55/70	Low power	44pin TSOPII/ 48 ball BGA
		3.3V	8/10	High speed	44pin TSOPII, 48ball BGA
	512Kx16	3.3V/5V	55/70	Low power	44pin TSOPII/48 TSOPI/ 48 ball BGA
		3.3V	8/10	High speed	44pin TSOPII, 48ball BGA
16M	2Mx8	3.3V/5V	70/55	Low power	44TSOPII
		3.3V/1.8V	10/15	High speed	44 TSOPII/48BGA
	1Mx16	3.3V/5V	55/70	Low power	48 TSOPI/ 48 ball BGA
		3.3V/1.8V	10/15	High speed	48pin TSOPI/ 48ball BGA/54TSOPII
32M	4Mx8/2Mx16	3V	55	Low power	48 TSOPI/ 48 ball BGA
64M	8Mx8/4Mx16	3V	55	Low power	48 TSOPI

SRAM Road map

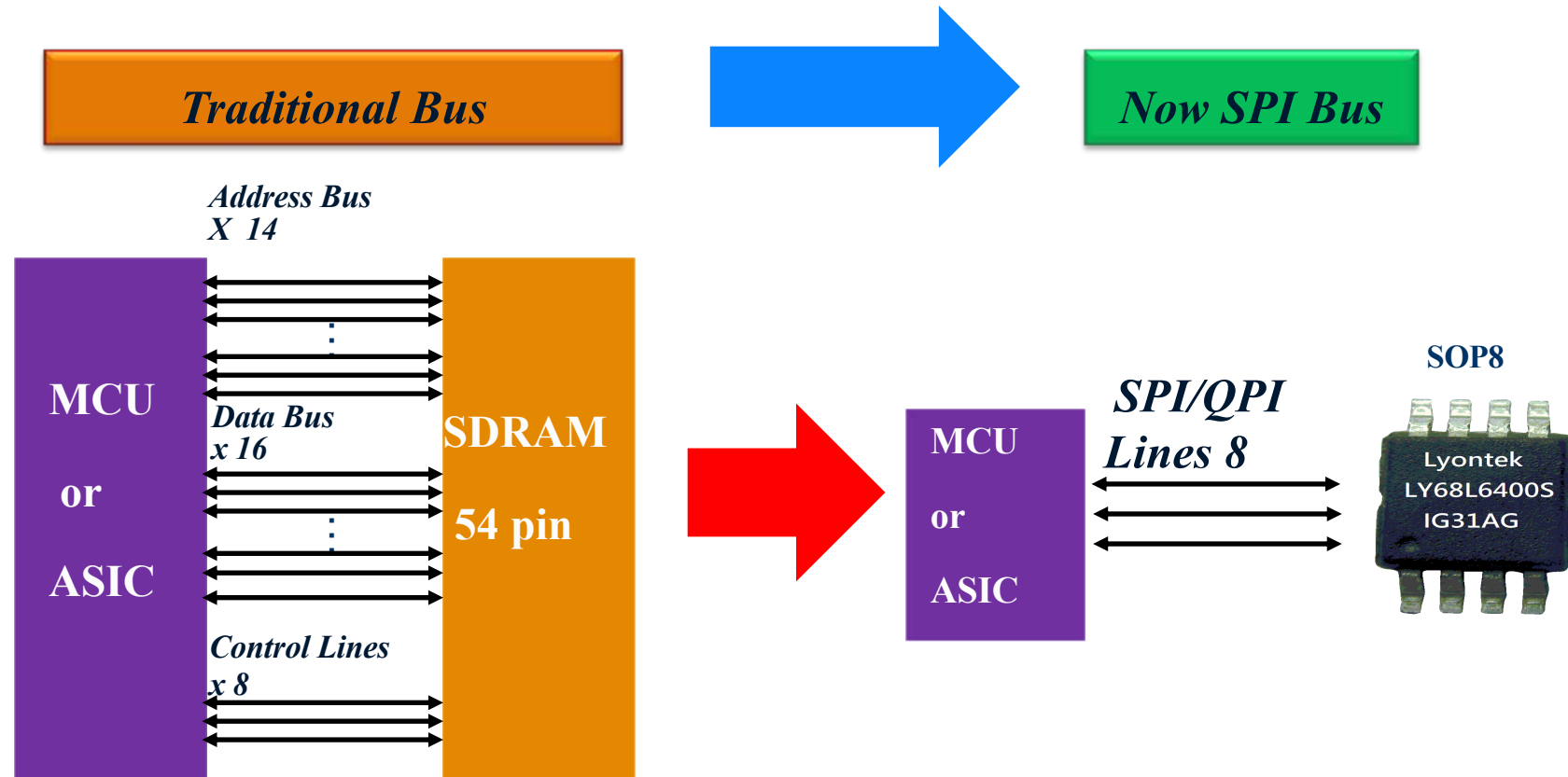


Low pin count RAM Introduction

Low pin count RAM

- *Mission: Introduce the lowest cost RAM solution*
- *Goal: The key low pin count RAM supplier*
- *Key Technology:*
 - Developing low pin count RAM of SRAM and PSRAM*
 - Focus on low density form 64K to 64M*
 - keeping long term supporting*

SPI vs. Traditional Bus Interface



- *Has only 4pin for SPI, 6 pin for QSPI*
- *Which can greatly simplify the PCB layout design*
- *Compatible with Flash footprint, SPI/Quad SPI*
- *Economic Density*
- *Long term Supply*
- *Power Saving*

Low pin count RAM Introduction

SRAM Type

- High pin count
- Small density
- Expensive

System Expanded Memory

DRAM

- Complex control
- Extreme high power
- High pin count

**Serial interface
Low pin count**

SRAM Type

PSRAM Type

**SPI/QSPI SRAM
2.5V~5.5V**

Low pin count

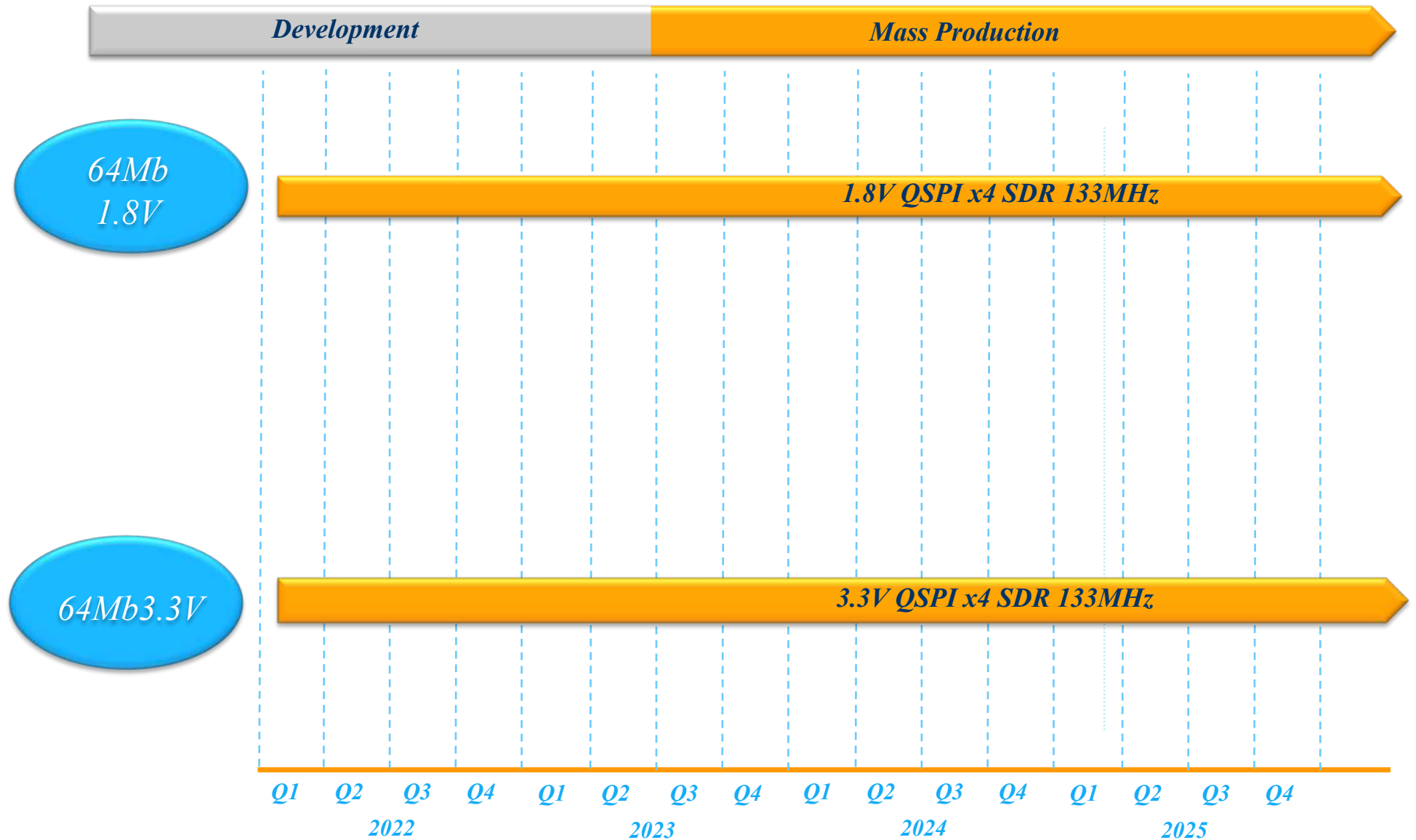
- Reduced controller pin count
- Economic Density
- SOP 8 package

**SPI/QSPI PSRAM
1.8V/3.3V**

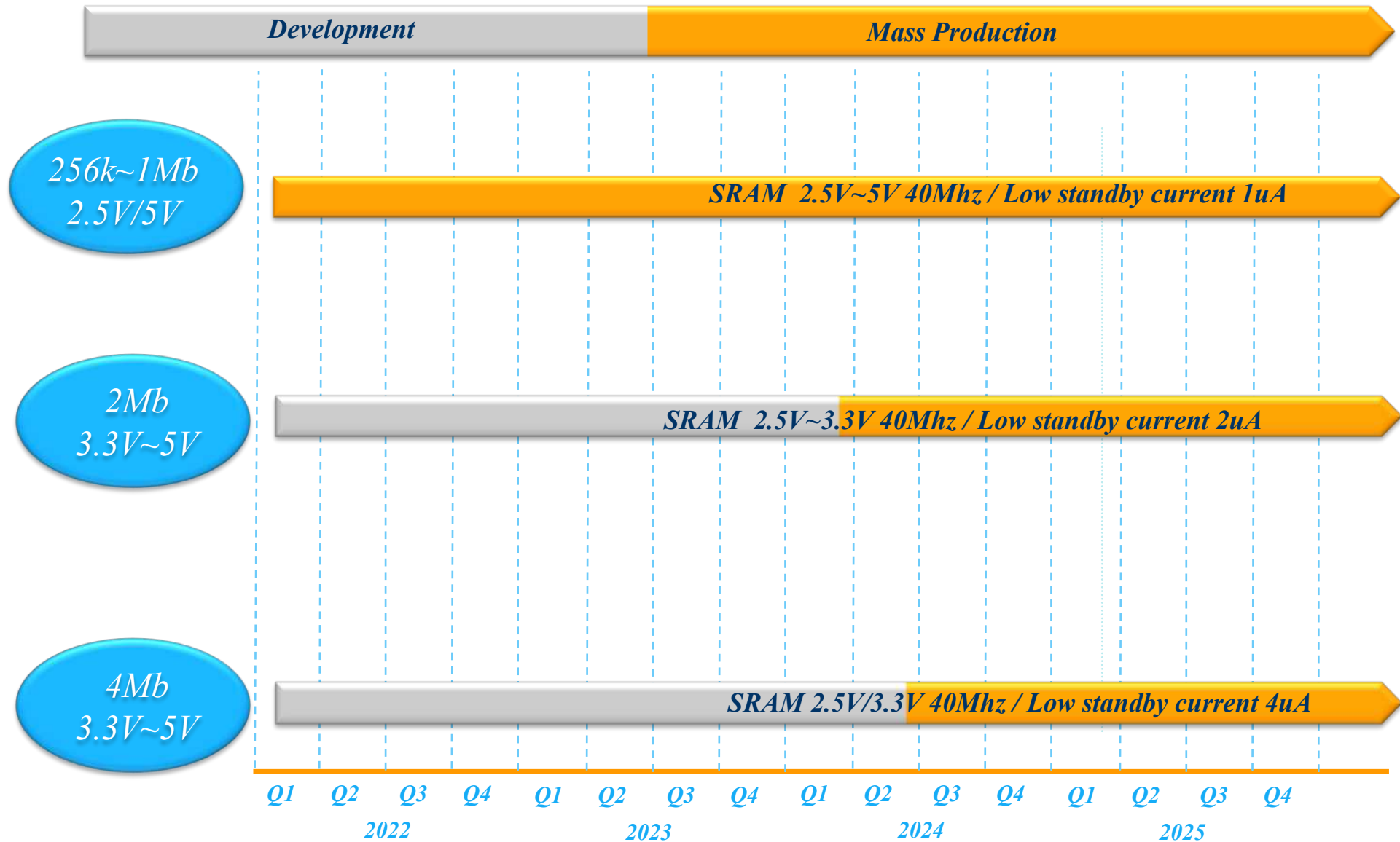
256Kb 1Mb 2Mb 4Mb

64Mb

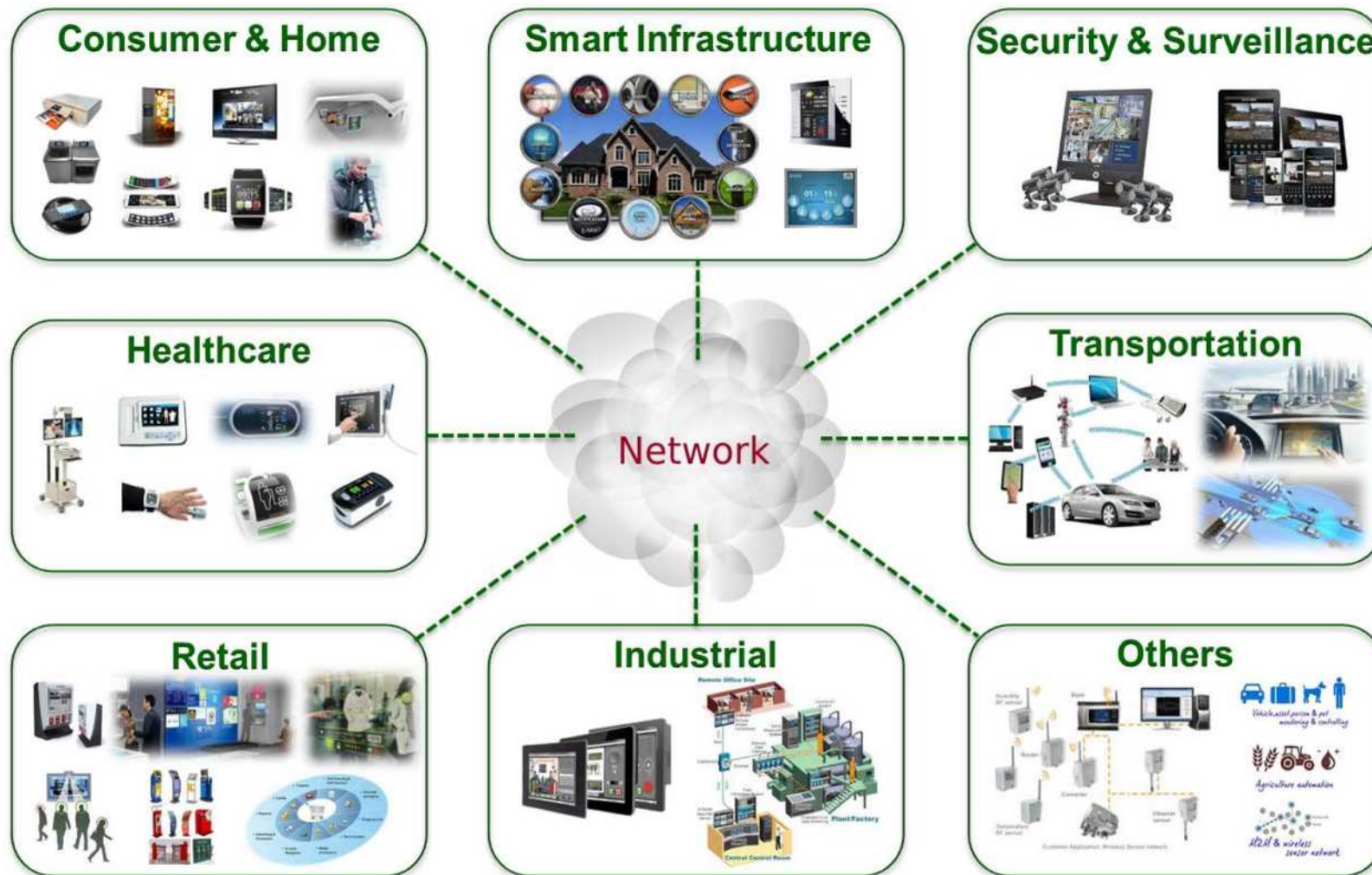
Low pin count RAM Roadmap



Low pin count RAM Roadmap

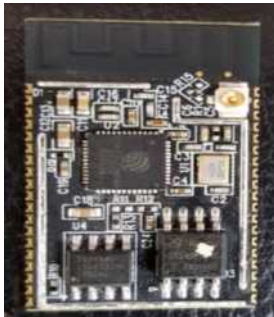


IOT:

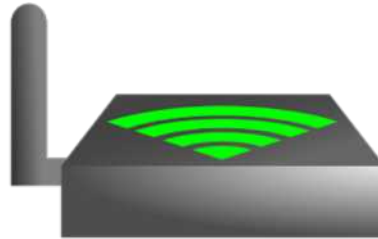


Communication

WiFi & Bluetooth Module



WiFi AP



Industrial

DTU



Remo monitor control



Smart meter



Others

Bike-Sharing



WiFi Vending Machine



E-POS



Fitness Tracker





Thanks!

