

# Microchip新先勢 – 探索先進科技的趨勢

2023



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A Leading Provider of Smart, Connected and Secure Embedded Control Solutions



SMART | CONNECTED | SECURE

Microchip Taiwan

2023 Nov

# Corporate Overview

## Leading Total Systems Solutions Provider:

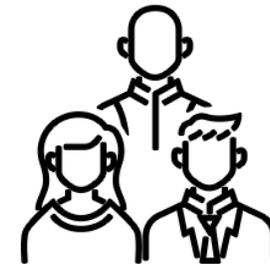
- High-performance standard and specialized Microcontroller, Digital Signal Controller and Microprocessor solutions
- Power, Mixed-Signal, Analog, Interface and Security solutions
- Clock and Timing solutions
- Wireless and Wired Connectivity solutions
- FPGA solutions
- Non-volatile EEPROM and Flash Memory solutions
- Flash IP solutions



\$6.8 Billion Revenue  
in FY2022



Headquartered near  
Phoenix in Chandler, AZ



~21,000  
Employees

# Our Purpose

*Empowering innovation which enhances the human experience by delivering smart, connected and secure technology solutions*



# Our Vision

*Be The Very Best Embedded Control Solutions Company Ever*



# Worldwide Technical Support Centers



**The only non-commissioned sales team in the semiconductor industry**

# Global Development Centers



# Manufacturing Locations



**6 High-Volume Factories; 14 Specialty Factories**

# Worldwide 8-bit Microcontroller Market Share

No.	1991 Rank	1996 Rank	2001 Rank	2005 Rank	2006-2009 Rank	2010 Rank	2014-2017 Rank	2021 Rank
1	Motorola	Motorola	Motorola	Motorola	Microchip	Renesas	Microchip	Microchip
2	Intel	NEC	Hitachi	Renesas	NEC	Microchip	NXP	NXP
3	Philips	Philips	NEC	Microchip	STMicro	Atmel	Renesas	Renesas
4	Mitsubishi	Hitachi	Microchip	NEC	Freescale	STMicro	STMicro	STMicro
5	NEC	Mitsubishi	STMicro	STMicro	Atmel	Samsung	CEC Huada	Others
6	Hitachi	Toshiba	Philips	Atmel	Renesas	Freescale	Cypress	
7	Toshiba	Matsushita	Toshiba	Toshiba	NXP	NXP	Si Labs	
8	Siemens	SGS-Thomson	Atmel	Philips	Cypress	Cypress	Datang	
9	TI	Intel	Matsushita	Fujitsu	Sony	Panasonic	SH Fudan	
10	Matsushita	Microchip	Sanyo	Infineon	Fujitsu	Fujitsu	Holtek	
11	National	Siemens	Samsung	Sanyo	Panasonic	Detang	Unigroup	
12	SGS-Thomson	Fujitsu	Mitsubishi	Samsung	Toshiba	NEC (1Q)	Panasonic	
13	Ricoh	TI	Infineon	Matsushita	Samsung	Sony	Nationz	
14	MHS	Sony	Sony	Sony	Datang	Toshiba	ABOV	
15	IIT	Zilog	TI	Sunplus	SI Labs	SI Labs	Ixys	
16	Sharp	Sharp	Fujitsu	Micronas	Holtek	JSC	Toshiba	
17	Fujitsu	Temec	Sunplus	Novatek	Infineon	Holtek	Sony	
18	Oki	Sanyo	Zilong	Intel	Elan	Infineon	On Semi	
19	Zilog	National	Novatek	Holtek	Winbond	Sonix	Sonix	
20	Sony	Oki	Micronas	Winbond	Denso	Elan	HZ Silan	
23	Microchip							

191%

Based on dollar shipment volume 1991-2021, Source: Gartner and Microchip

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# Worldwide 16-bit Microcontroller Market Share

No.	2004 Rank	2006 Rank	2008 Rank	2010 Rank	2012 Rank	2014 - 2016 Rank	2017-2019 Rank	2021 Rank
1	Renesas	Renesas	Renesas	Renesas	Renesas	Renesas	Renesas	Renesas
2	Infineon	Infineon	Infineon	Infineon	Infineon	Infineon	TI	Infineon
3	Freescale	Freescale	Samsung	TI	TI	Freescale/NXP	Infineon	TI
4	TI	Fujitsu	TI	Samsung	Freescale	TI	NXP	NXP
5	NEC	TI	Freescale	Freescale	Fujitsu	Microchip	Microchip	Microchip
6	Matsushita	Intel	Fujitsu	Fujitsu	Samsung	Spansion	Others	Others
7	Toshiba	Toshiba	Toshiba	Toshiba	Microchip	Samsung		
8	Fujitsu	NEC	Intel	Microchip	Toshiba	Toshiba		
9	Intel	Sunplus	NEC	Intel	Intel	INSIDE		
10	STMicro	Sony	Sony	Sony	INSIDE	EM Micro		
11	Oki	NXP	Panasonic	JSC Sitronics	Sony	NXP		
12	Sony	Micronas	NXP	Sunplus I	CEC Huada	Sunplus		
13	Micronas	Winbond	Winbond	Winbond	JSC	Sony		
14	Sunplus	Matsushita	Microchip	NXP	EM Micro	Ixys		
15	Winbond	Microchip	Micronas	Micronas	SH Fudan	Maxim		
16	Microchip	Samsung	Sunplus I	Sunplus MM	Sunplus	Datang		
17	Samsung	Oki	Sunplus MM	Seiko Epson	Datang	CEC Huada		
18	Philips	National	Sharp	Panasonic	Winbond	SSM		
19	Magnachip	Sharp	Rohm	Rohm	Ixys	Seiko Epsen		
20	Sharp	STMicro	Seiko		Seiko Epson	RTI Group		

Based on dollar shipment volume 1991-2021, Source: Gartner and Microchip

# Worldwide 32-bit Microcontroller Market Share

No.	2010 Rank	2011 Rank	2012 Rank	2013 Rank	2014 Rank	2016-2017 Rank	2019 Rank	2020-2021 Rank
1	Renesas	Renesas	Renesas	Renesas	Renesas	Renesas	Renesas	ST-Micro
2	Freescale	Freescale	Freescale	Freescale	Freescale	NXP	NXP	NXP
3	TI	TI	ST-Micro	ST-Micro	ST-Micro	ST-Micro	ST-Micro	Renesas
4	ST-Micro	ST-Micro	TI	TI	TI	TI	Microchip	Infineon
5	Denso	NXP	Atmel	Atmel	Atmel	Infineon	Infineon	Microchip
6	Fujitsu	Denso	Denso	Infineon	NXP	Microchip	TI	TI
7	NXP	Atmel	Infineon	Denso	Infineon	Cypress	Cypress	Others
8	Atmel	Fujitsu	NXP	NXP	Denso	Others	Others	
9	Toshiba	Infineon	Toshiba	Melfas	Microchip			
10	Infineon	Toshiba	Fujitsu	Toshiba	Toshiba			
11	Panasonic	Panasonic	Panasonic	Microchip	Spansion			
12	Em Micro	EM Micro	Microchip	CEC-Huada	Cypress			
13	Rohm	Rohm	Melfas	Fujitsu	Samsung			
14	JSC	JSC	Samsung	Spansion	Melfas			
15	Shenzhen St	Microchip	Rohm	Cypress	Winbond			
16	Huahong	Shenzhen St	Energy Micro	Panasonic	Panasonic			
17	Seiko Epson	Huahong	CEC Huada	SH Huahong	Nationz Tech			
18	Winbond	Winbond	Nationz	SH Fudon	CEC Huada			
19	Microchip	Seiko Epson	SH Fudan	Winbond	Energy Micro			
20	Samsung	Samsung	Cypress	Datang	Rohm			

Based on dollar shipment volume 1991-2021, Source: Gartner and Microchip

# Worldwide Microcontroller Market Share

No.	1991 Rank	1996 Rank	2003 Rank	2008 Rank	2009 Rank	2014 Rank	2019 Rank	2021 Rank
1	Motorola	Motorola	Renesas	Renesas	Renesas	Renesas	Renesas	Renesas
2	Intel	NEC	Motorola	NEC	NEC	Freescale	NXP	NXP
3	Philips	Philips	NEC	Freescale	Freescale	ST-Micro	Microchip	Microchip
4	Mitsubishi	Hitachi	Matsushita	Infineon	Samsung	Microchip	ST-Micro	ST-Micro
5	NEC	Mitsubishi	Infineon	Samsung	Microchip	NXP	Infineon	Infineon
6	Hitachi	Toshiba	Fujitsu	Microchip	TI	TI	TI	TI
7	Toshiba	Matsushita	Toshiba	ST-Micro	Infineon	Infineon	Others	Others
8	Siemens	SGS-Thom	Microchip	TI	St-Micro	Atmel		
9	TI	Intel	Samsung	Fujitsu	Fujitsu	Spansion		
10	Matsushita	Microchip	ST-Micro	NXP	NXP	Samsung		
23	Microchip							

Annotations: A bracket indicates a 16.5% increase in market share for the top 3 companies (Renesas, NXP, Microchip) between 2019 and 2021. Another bracket indicates a 5.9% increase for the top 2 companies (Renesas, NXP) between 2019 and 2021. Blue arrows point from the 2019 and 2021 ranks of the 10th and 23rd ranked companies to the 2021 rank of Microchip.

1991 & 1996 data extrapolated from 8-bit MCU: Source: Gartner and Microchip

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# Worldwide Microcontroller Market Share

No.	Company	2020	2021	Change	2021 Marketshare
1	NXP	2,980	3,795	27%	18.8%
2	Microchip	2,872	3,584	25%	17.8%
3	Renesas	2,748	3,420	24%	17.0%
4	ST	2,506	3,374	35%	16.7%
5	Infineon	1,953	2,378	22%	11.8%

# Analog Market Share

No.	Company	2020	2021	Change	2021 Marketshare
1	Texas Instruments	10,886	14,050	29%	19.0%
2	Analog Devices	7,722	9,355	21%	12.7%
3	Skyworks Solutions	3,970	5,910	49%	8.0%
4	Infineon	3,820	4,800	26%	6.5%
5	ST	3,259	3,906	20%	5.3%
6	Qorvo	3,182	3,875	22%	5.2%
7	NXP	2,466	3,457	40%	4.7%
8	ON Semi	1,606	2,115	32%	2.9%
9	Microchip	1,470	1,839	25%	2.5%
10	Renesas	890	1,110	25%	1.5%
-	Others	17,684	23,497	33%	31.8%
	<b>Total</b>	<b>56,955</b>	<b>73,914</b>	<b>30%</b>	<b>100%</b>

Source: IC Insights, company reports

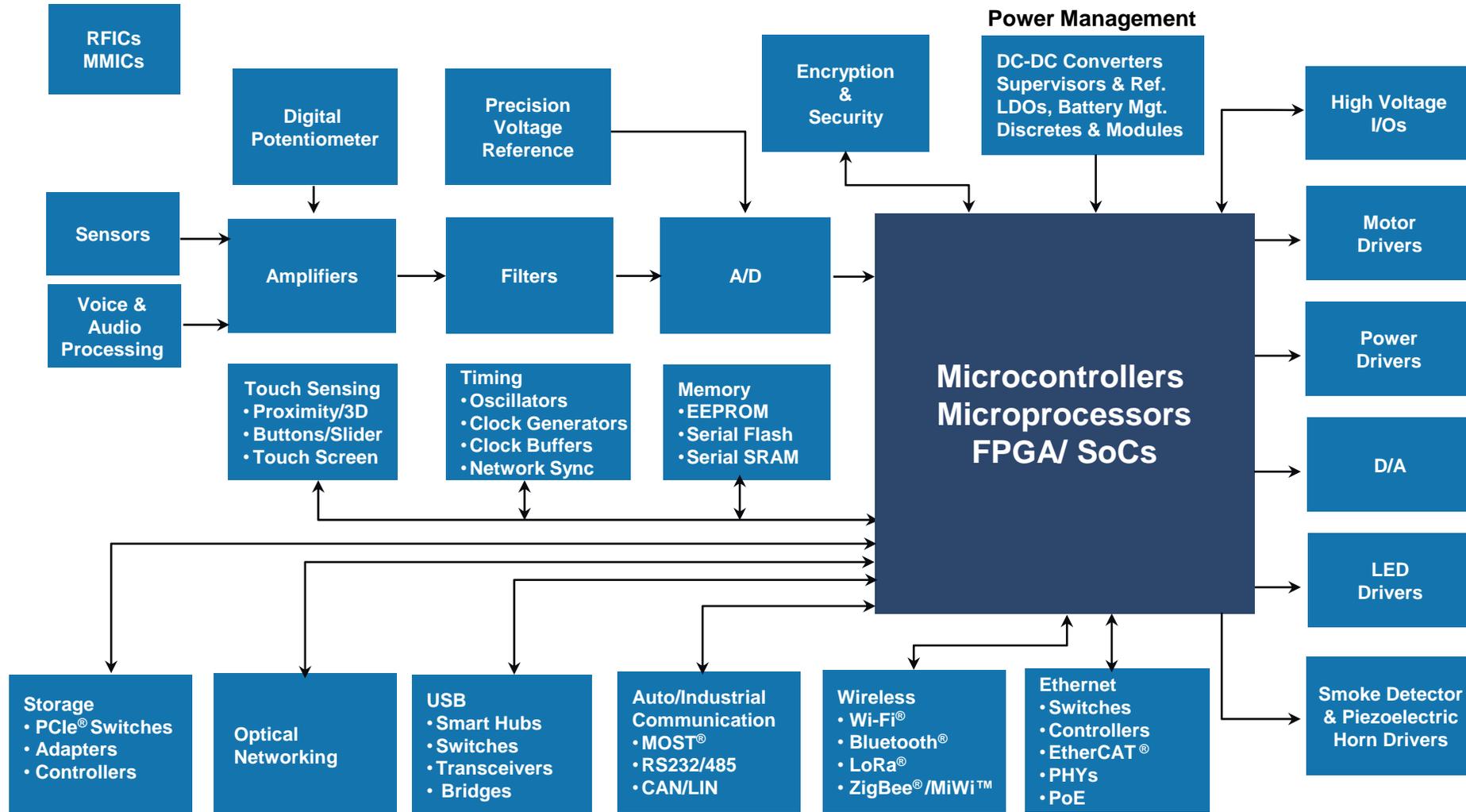
Figures include sales from acquired companies in 2020 and 2021

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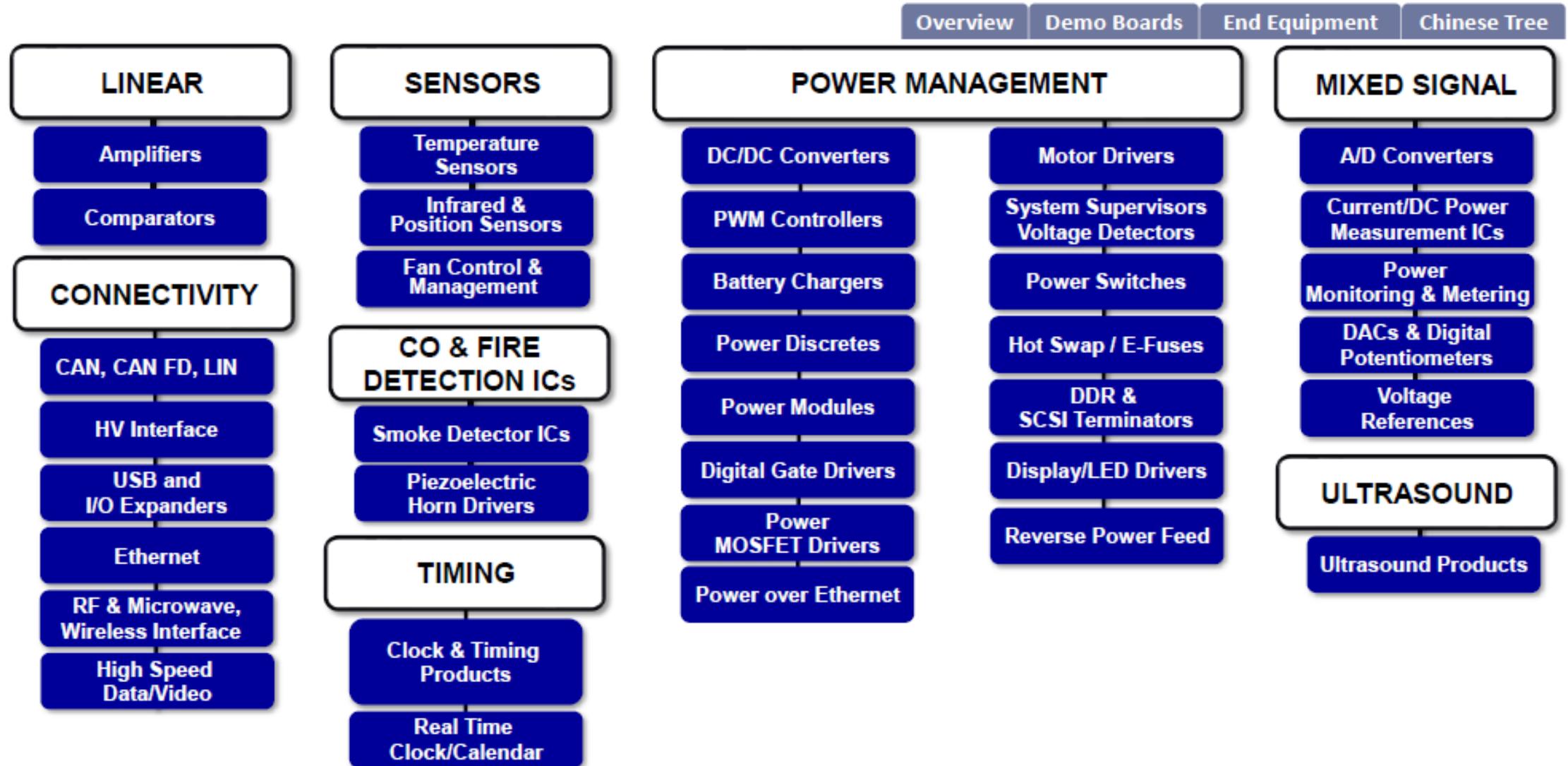


# Providing System Solutions

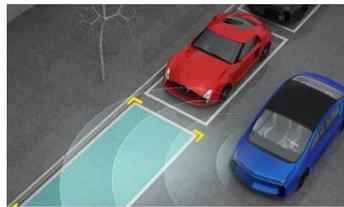
## Portfolio of Hardware, Software and Services



# Analog & Interface Products



# Combined Portfolio: End Markets

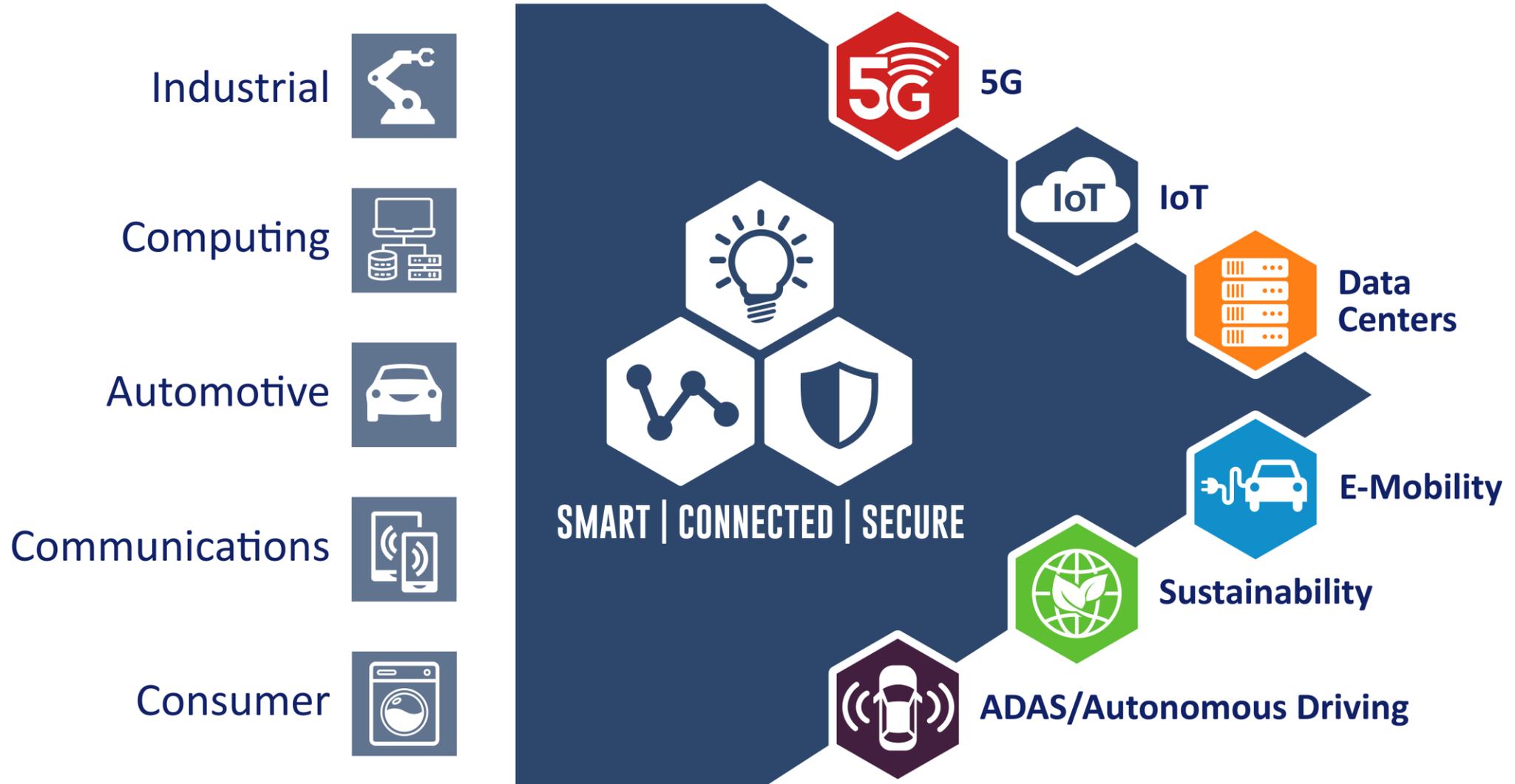


Microchip

COMBINED CAPABILITIES

Microsemi

# Market Megatrends



# Clash of Two Worlds

- **Sustainability (energy saving)** and **Performance (energy-hungry)**
- Microchip's technologies can help alleviate these clashes.

## Energy hungry



## Performance

- Enablement of rich experiences
- Manifestation via high-end features



## Energy saving (or energy efficient)



## Sustainability

- Responsibility for resources
- Energy label marketing
- Enabled by product innovation

# What About Microchip's Sustainability Corporate Policy?

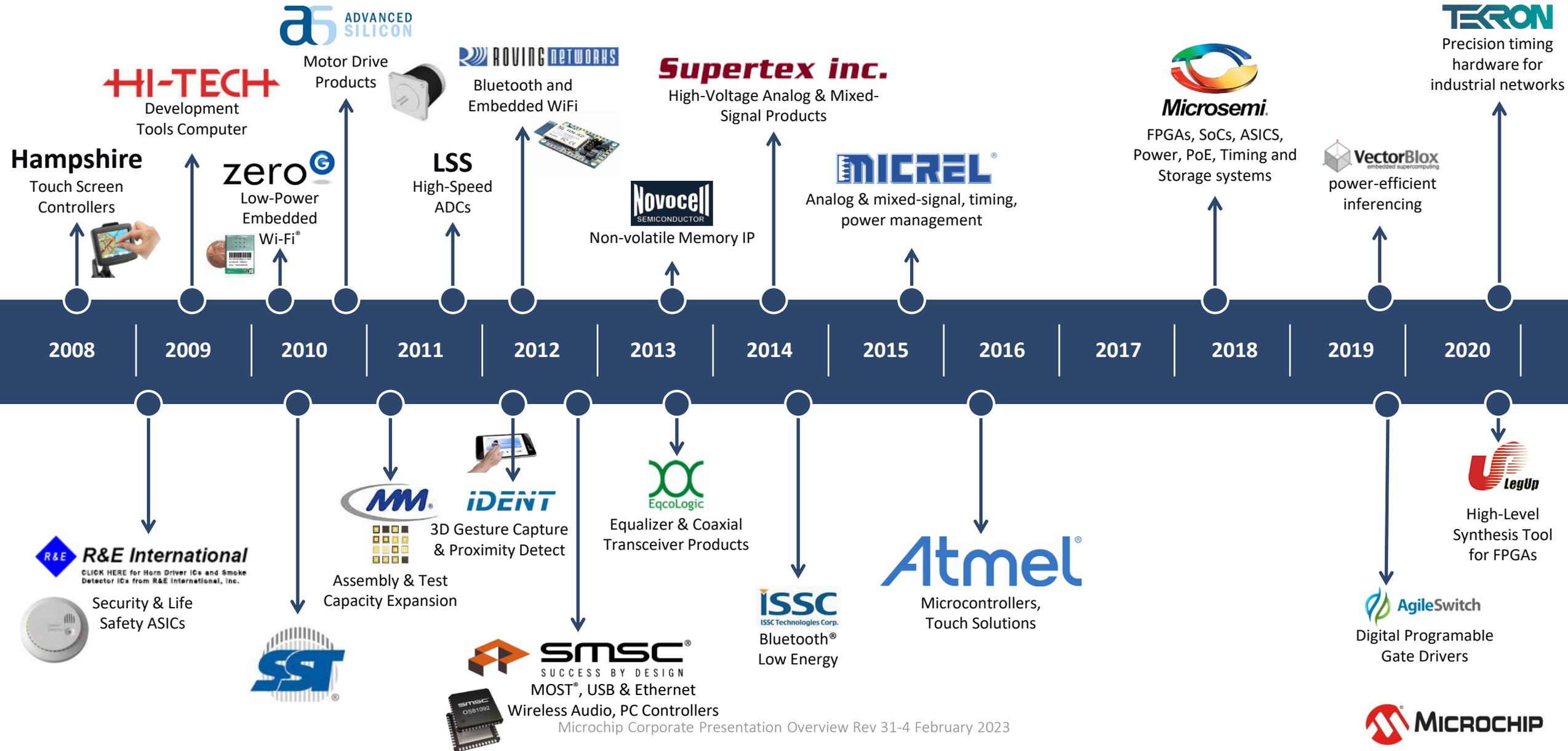
“*As best practices for sustainability evolve and mature, so has Microchip.*”

“Our vision to be the leading supplier of embedded control solutions includes a corporate commitment to acting in an ethical manner. Our focus on environmental and social responsibility, transparency and engagement guides our decision-making processes and helps keep us accountable as we continuously improve all aspects of our business.”



Ganesh Moorthy  
President and  
Chief Executive Officer

# Expanding Microchip Solutions Through Acquisitions



# 科技論壇議程

時程	議程
09:00-09:15	開場致詞
09:15-09:35	先進科技的趨勢
09:35-10:15	永續推動電源新發展，迎接未來新需求
10:15-10:45	中場休息
10:45-11:15	EV 能量的補給站 - Charging Pile
11:15-11:40	為車載安全及娛樂系統易筋洗髓 - T1 Ethernet and PCIe
11:40-12:10	創新的馬達技術與趨勢
12:10-13:10	午餐時間
13:10-13:50	創造明天: 從 MCU 到 AI, 跨越極限從設備到雲端
13:50-14:20	Edge Computing 的協議棧 - FPGA
14:20-14:50	智能家居產業的新起點 - Matter
14:50-15:20	中場休息
15:20-15:50	類比的新玩意 - Inductive Position Sensor
15:50-16:20	安全技術的趨勢與挑戰
16:20-16:45	未來必要而且重要的Functional Safety技術
16:45-17:00	幸運抽獎與問題討論

# Thank You

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