



1Q25 Investor Conference

May. 7th, 2025

winbond
We Deliver

- We have made forward-looking statements in this presentation. Our forward-looking statements contain information regarding, among other things, our financial condition, future expansion plans and business strategies. We have based these forward-looking statements on our current expectations and projections about future events. Although we believe that these expectations and projections are reasonable, such forward-looking statements are inherently subject to risks, uncertainties and assumptions about us.
- We undertake no obligation to publicly update or revise any forward-looking statements whether as a result of new information, future events or otherwise. In light of these risks, uncertainties and assumptions, the forward-looking events discussed in this conference might not occur and our actual results could differ materially from those anticipated in these forward-looking statements.
- The information contained herein shall also not constitute an offer to sell or a solicitation of an offer to buy the company's securities nor shall there be any sale of such securities in any state or country in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or country.

01 Financial Results

Hsiang-Yun Fan - EVP

02 Business Recap & Outlook

James Chen - President

03 Excellence & Forward

Jason Lin - VP

04 Q & A

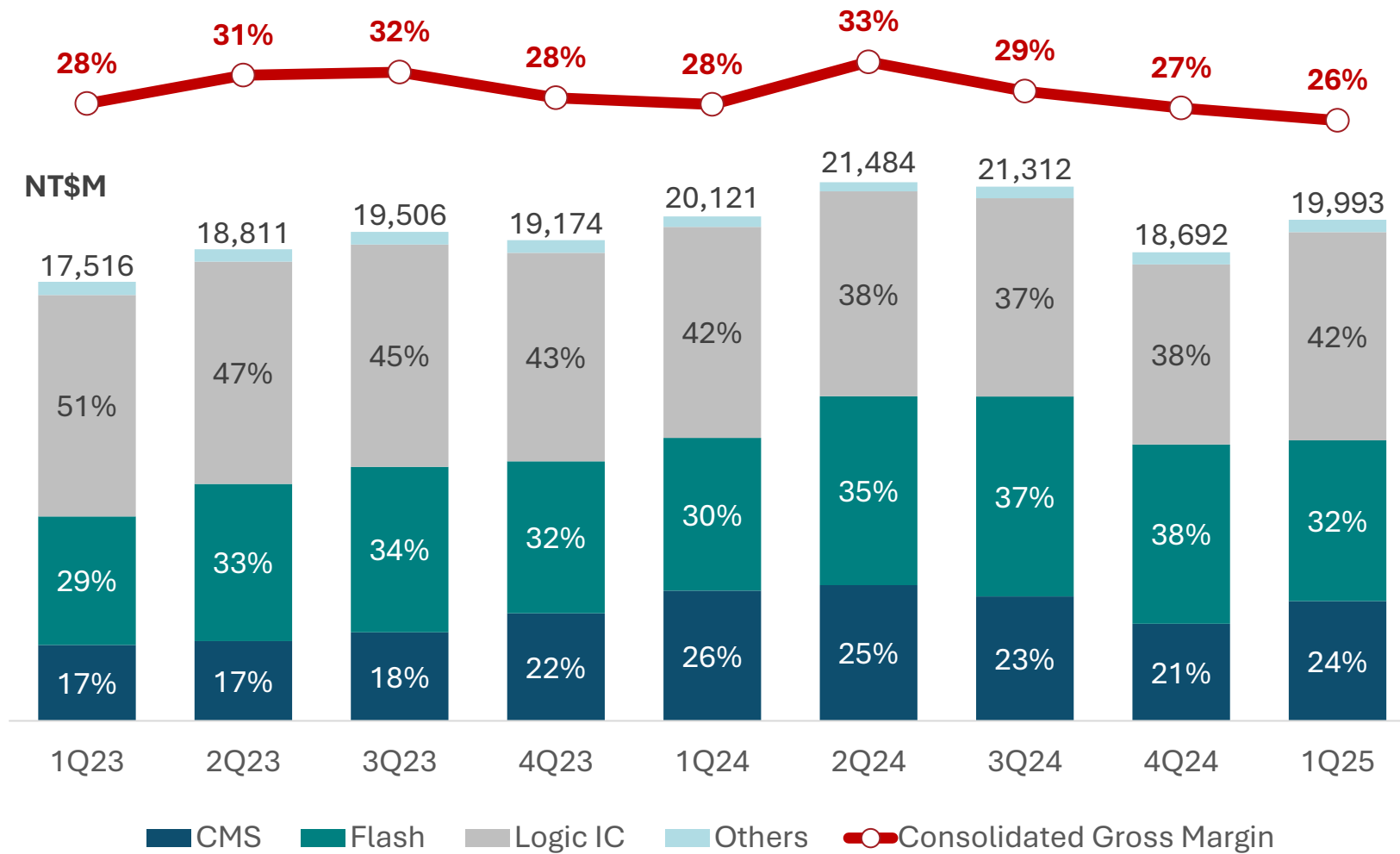
Financial Results

Statement of Comprehensive Income - Consolidated

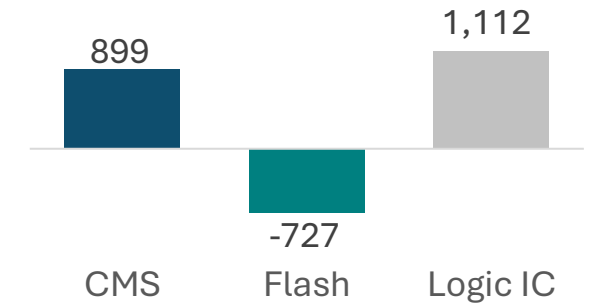
(In NT\$ millions unless otherwise noted)

	1Q25	4Q24	QoQ	1Q24	YoY
Net Sales	19,993	18,692	+7.0%	20,121	-0.6%
Gross Profit	5,122	5,081	+0.8%	5,562	-7.9%
Gross Margin	25.6%	27.2%	-2 ppts	27.6%	-2 ppts
Operating Expenses	6,087	5,822	+4.6%	5,748	+5.9%
Operating Profit (Loss)	(965)	(741)	-224	(187)	-778
Operating Margin	-4.8%	-4.0%	-1 ppts	-0.9%	-4 ppts
Non-Operating Items	(180)	(40)	-140	(240)	+60
Income Tax Expense (Benefit)	(159)	(102)	-57	(162)	+3
Net Income (Loss)	(987)	(678)	-309	(265)	-722
Net Profit Margin	-4.9%	-3.6%	-1 ppts	-1.3%	-4 ppts
Net Income to Shareholders of the Parent Company	(1,091)	(648)	-443	(464)	-627
Earning Per Share (NT Dollar)	<u>NT\$-0.24</u>	<u>NT\$-0.15</u>		<u>NT\$-0.11</u>	
EBITDA	2,435	2,719		2,911	
Average Exchange Rate--USD/NTD	32.89	32.36		31.45	

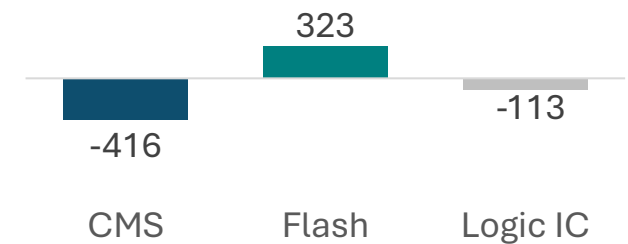
Revenue by Products - Consolidated



1Q25 vs. 4Q24 (QoQ)



1Q25 vs. 1Q24 (YoY)



*CMS stands for Customized Memory Solution, formerly known as DRAM business

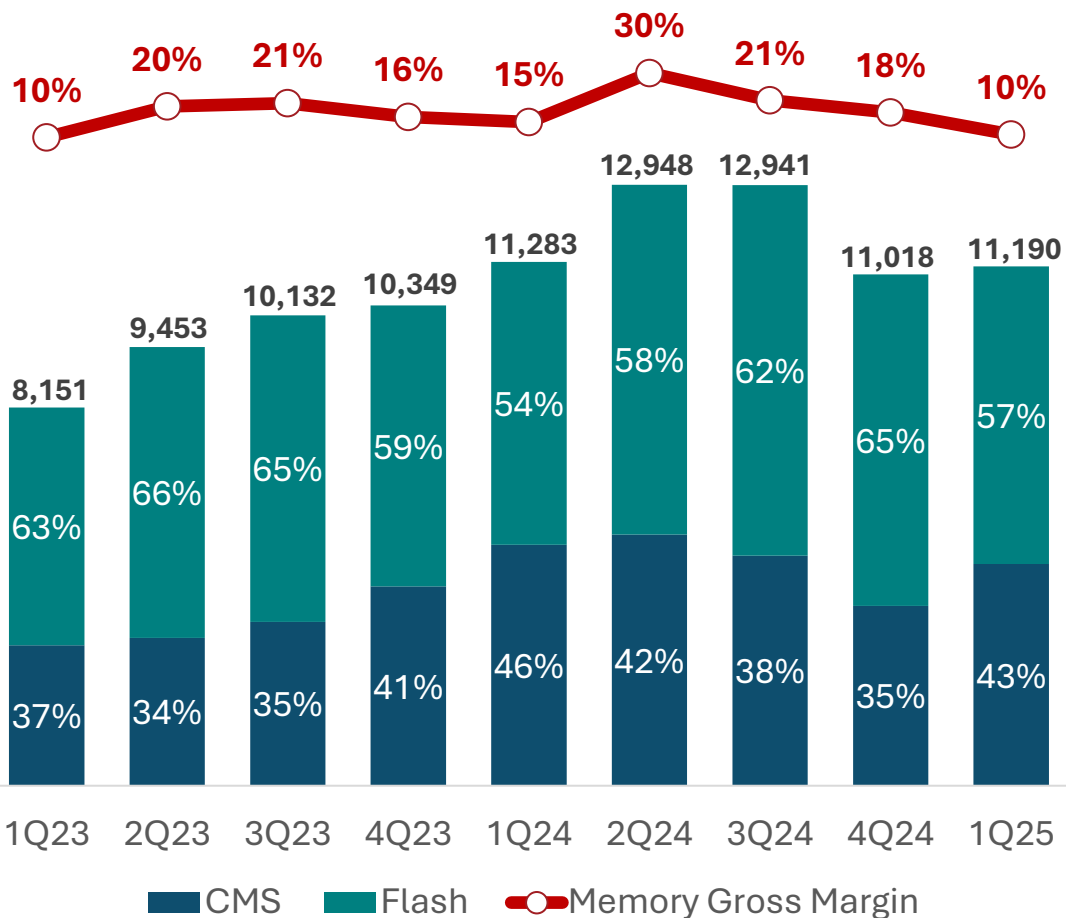
**Others revenue represents software service revenue, mainly from AMTC and METC. It accounts for around 1 to 3% of total revenue

Revenue and Gross Margin by Products

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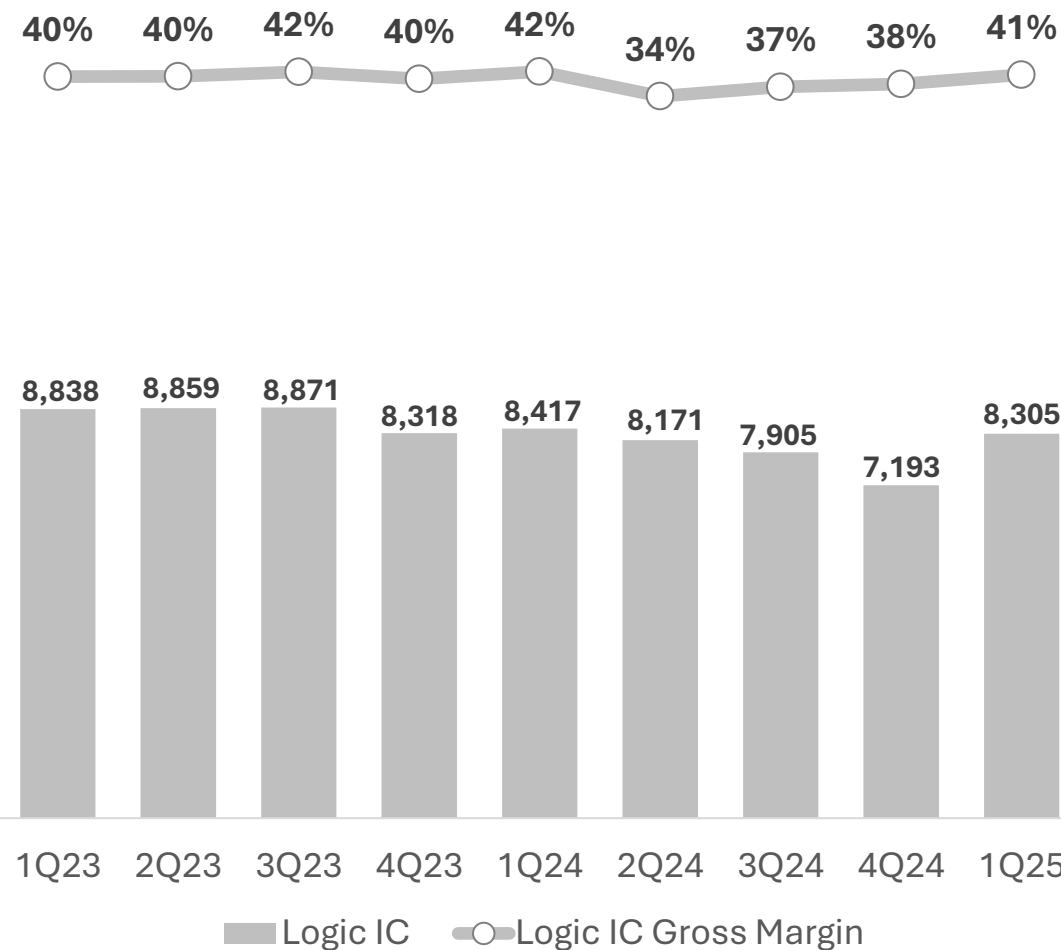
Memory

NT\$M



Logic IC

NT\$M



Memory Business Quarterly Highlights

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(In NT\$ millions unless otherwise noted)	1Q25	4Q24	QoQ	1Q24	YoY
Net Sales	11,190	11,018	+1.6%	11,283	-0.8%
Gross Profit	1,172	1,934	-39.4%	1,637	-28.4%
Gross Margin	10.5%	17.6%	-7 pts	14.5%	-4 pts
Operating Expenses	2,507	2,525	-0.7%	2,334	+7.4%
Operating Income (Loss)	(1,336)	(592)	-744	(697)	-639
Operating Margin	-11.9%	-5.4%	-7 pts	-6.2%	-6 pts
Capacity Utilization	70~80%	80~90%		70~80%	

Balance Sheet - Consolidated

(In NT\$ millions unless otherwise noted)

	03.31.2025		12.31.2024		03.31.2024	
Cash & Cash Equivalents	18,378	10%	14,100	8%	13,710	7%
Accounts Receivable	11,855	7%	10,038	6%	11,387	6%
Inventories	23,540	13%	24,201	13%	22,392	12%
Long-term Investments	18,860	10%	19,152	11%	25,961	15%
Property, Plant, Equipment and ROU	101,793	56%	103,607	58%	104,522	56%
Total Assets	181,302	100%	177,784	100%	185,600	100%
Current Liabilities	44,859	25%	41,762	23%	32,558	18%
Long-term Interests-bearing Debts	28,012	15%	31,128	18%	36,362	20%
Bonds Payable	4,783	3%	-	-	9,984	5%
Total Liabilities	83,247	46%	78,625	44%	86,901	47%
Total Stockholders' Equity	98,056	54%	99,159	56%	98,699	53%
Book Value Per Share (NT Dollar)	20.10		20.37		21.76	
Debt / Equity Ratio	0.85		0.79		0.88	
Current Ratio	1.44		1.43		1.93	

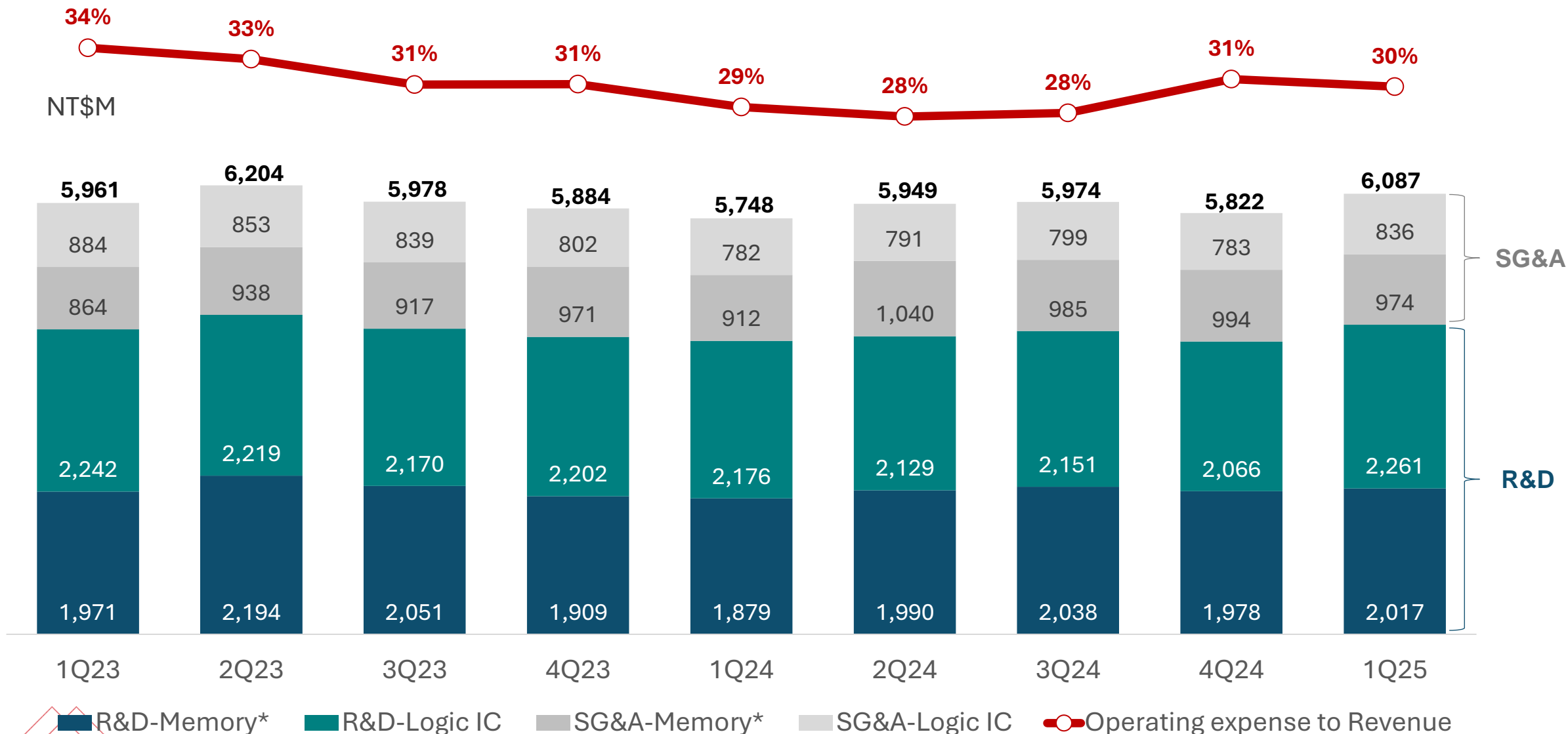
* Total outstanding shares were 4,500 million units on 03.31.2025

Statement of Cash Flow - Consolidated

(In NT\$ millions unless otherwise noted)	1Q25	4Q24	1Q24
Cash Flow from Operating Activities	393	2,550	1,723
Depreciation & Amortization	3,255	3,203	3,052
Cash Flow from Investing Activities	(2,045)	(3,370)	(8,266)
CAPEX	(1,582)	(3,219)	(8,578)
Cash Flow from Financing Activities	5,457	(565)	3,245
Bank Loan	651	(432)	3,323
Net Change	4,278	(1,404)	(3,252)
Ending Balance	18,378	14,100	13,710
Free Cash Flow*	-1,189	-669	-6,855

*Free cash flow = Cash from operating activities – CAPEX

Operating Expenses - Consolidated



*Including operating expenses from memory and software service businesses

Logic Business Performance - Nuvoton Income Statement

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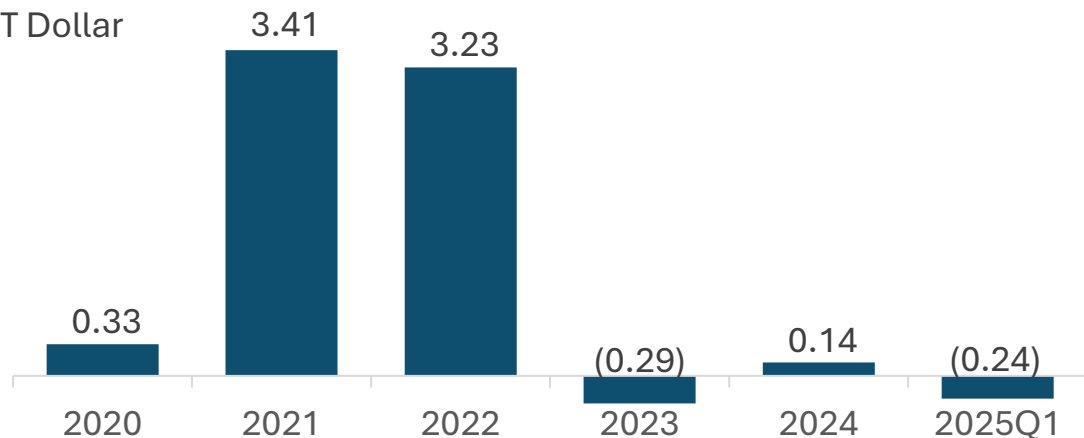
(In NT\$ millions unless otherwise noted)	1Q25	4Q24	QoQ	1Q24	YoY
Net Sales	8,364	7,270	+15.1%	8,468	-1.2%
Gross Profit	3,451	2,769	+24.6%	3,534	-2.3%
Gross Margin	41.3%	38.1%	+3 pts	41.7%	0 pts
Operating Expenses	3,177	2,989	+6.3%	3,078	+3.2%
Operating Margin	3.3%	-3.0%	+6 pts	5.4%	-2 pts
Non-Operating Items	59	201	-142	(51)	+110
Income Tax Expense (Benefit)	115	43	+72	(4)	+119
Net Income (Loss)	217	(62)	280	409	-192
Net Profit Margin	2.6%	-0.9%	+3 pts	4.8%	-2 pts
Earning Per Share (NT Dollar)	<u>NT\$0.52</u>	<u>-NT\$0.15</u>		<u>NT\$0.97</u>	

(In NT\$ millions unless otherwise noted)

	03.31.2025		12.31.2024		03.31.2024	
Cash & Cash Equivalents	10,436	28%	5,704	19%	6,433	20%
Accounts Receivable	4,983	14%	3,604	12%	4,698	15%
Inventories	7,281	20%	7,126	24%	7,060	22%
Long-term Investments	3,054	8%	3,353	11%	3,210	10%
Property, Plant, Equipment and ROU	8,441	23%	8,046	26%	7,966	25%
Total Assets	36,563	100%	30,296	100%	31,785	100%
Current Liabilities	11,889	33%	10,431	34%	9,480	30%
Non-Current Liabilities	8,775	24%	4,202	14%	6,448	20%
Total Liabilities	20,664	57%	14,633	48%	15,928	50%
Total Stockholders' Equity	15,899	43%	15,663	52%	15,857	50%
Book Value Per Share (NT Dollar)	37.88		37.31		37.78	
Debt / Equity Ratio	1.30		0.93		1.00	
Current Ratio	2.00		1.69		2.03	

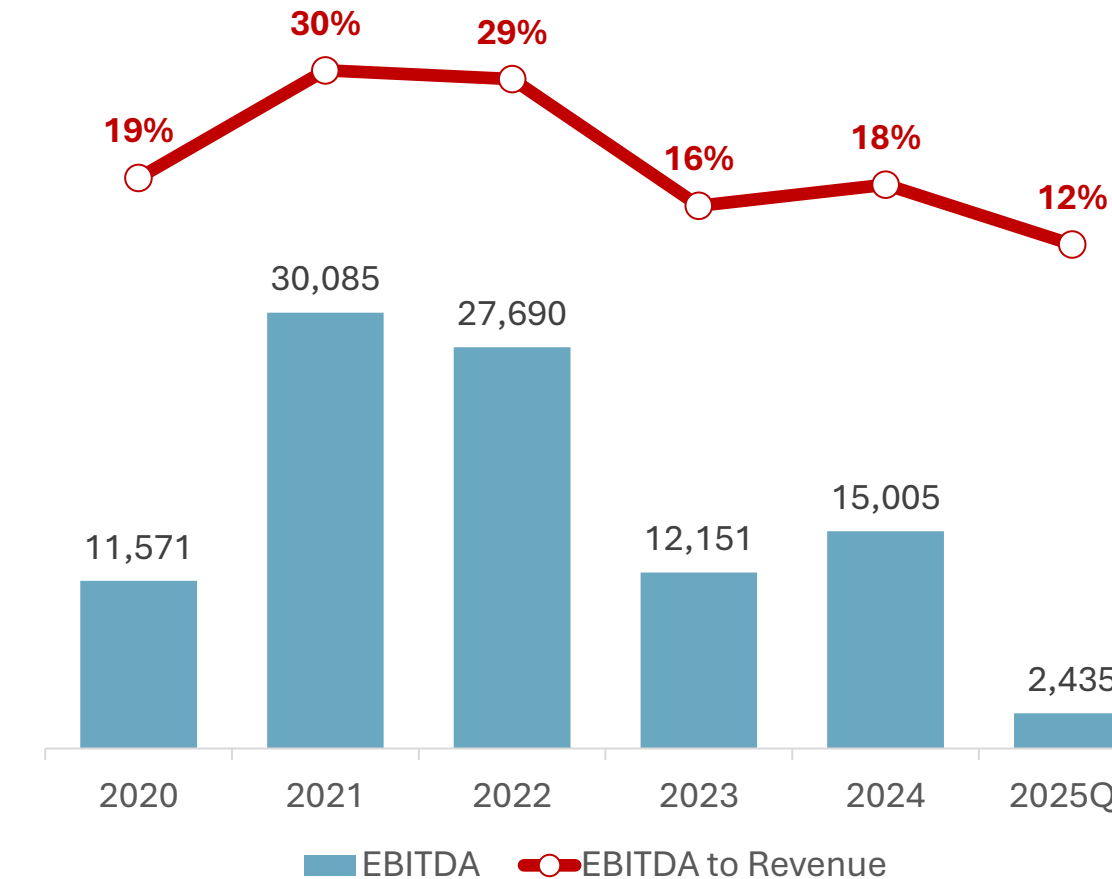
EPS

NT Dollar



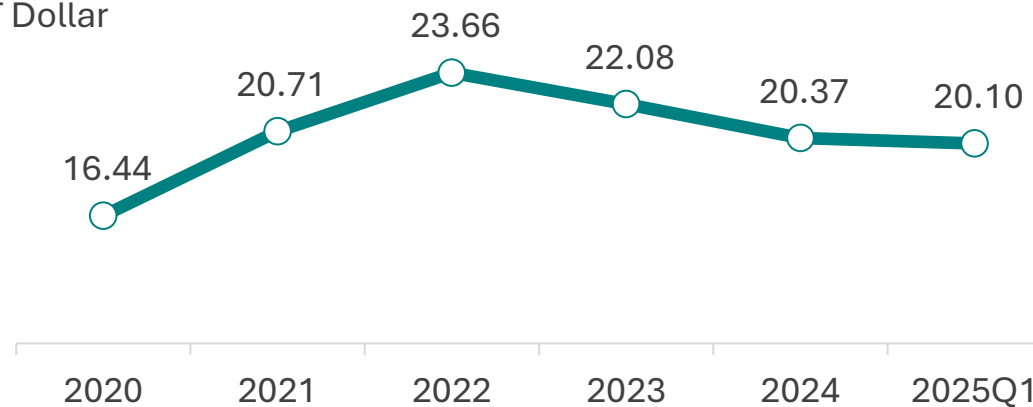
EBITDA

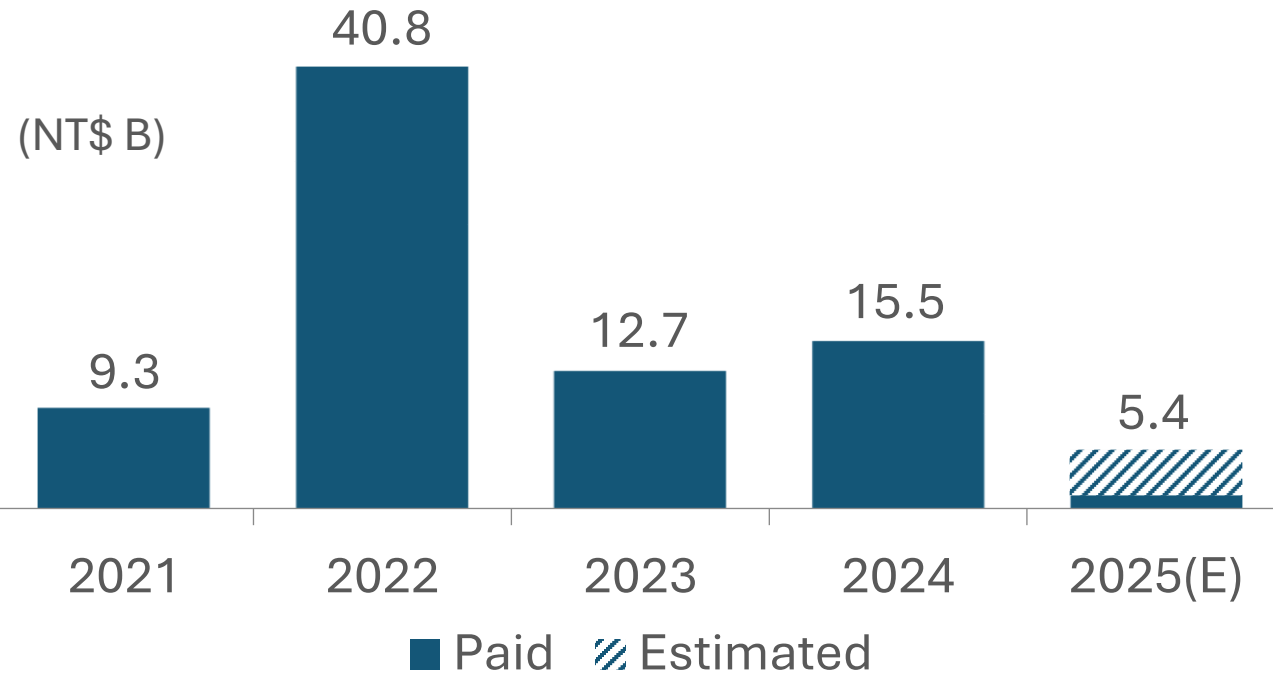
NT\$M



BVPS

NT Dollar





Cash Basis, as of May 7th, 2025

- 1Q25 CAPEX was NT\$1.3B
- 2025 CAPEX is estimated approx. NT\$5.4B, in which WFE CAPEX accounts for ~70%

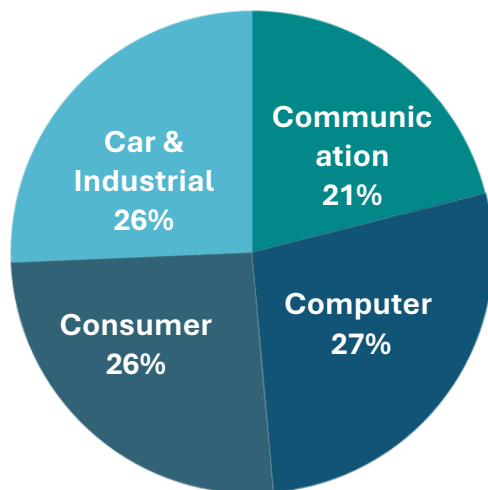
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Business Recap & Outlook

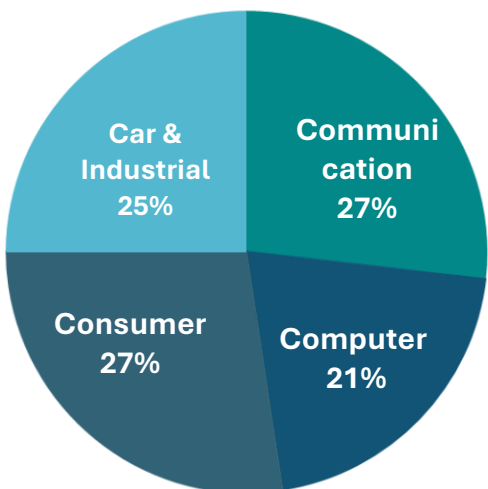
	QoQ 1Q25 vs. 4Q24	YoY 1Q25 vs. 1Q24
	CMS	CMS
Revenue	+23%	-8%
Bit Shipment	Increased low-fifties%	Decreased low-teens%
Blended ASP	Decreased low-twenties%	Decreased low-single digit%
	Flash	Flash
Revenue	-10%	+5%
Bit Shipment	Flat	Increased mid-single digit%
Blended ASP	Decreased low-teens%	Decreased mid-single digit%
Exchange Rate	+1.9%	+4.8%

Memory Business Revenue Breakdown by Application

4Q24

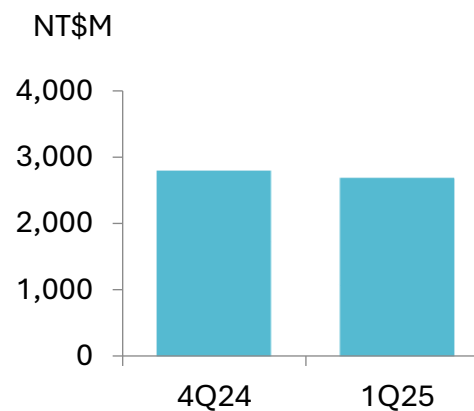


1Q25



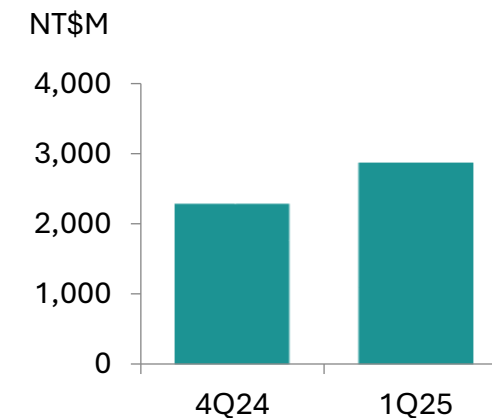
Car & Industrial

QoQ -4%



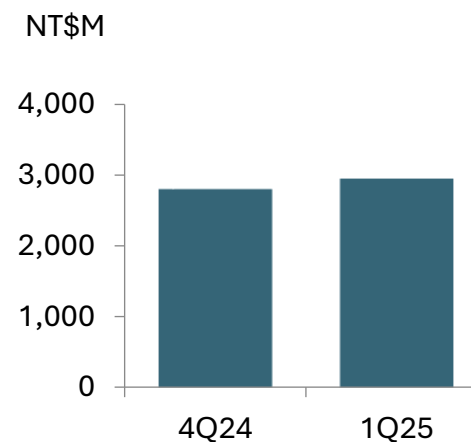
Communication

QoQ +26%



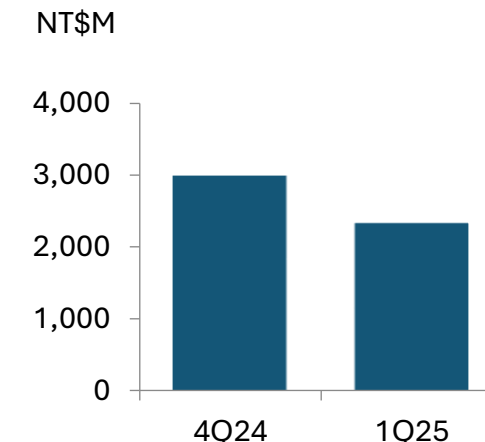
Consumer

QoQ +5%



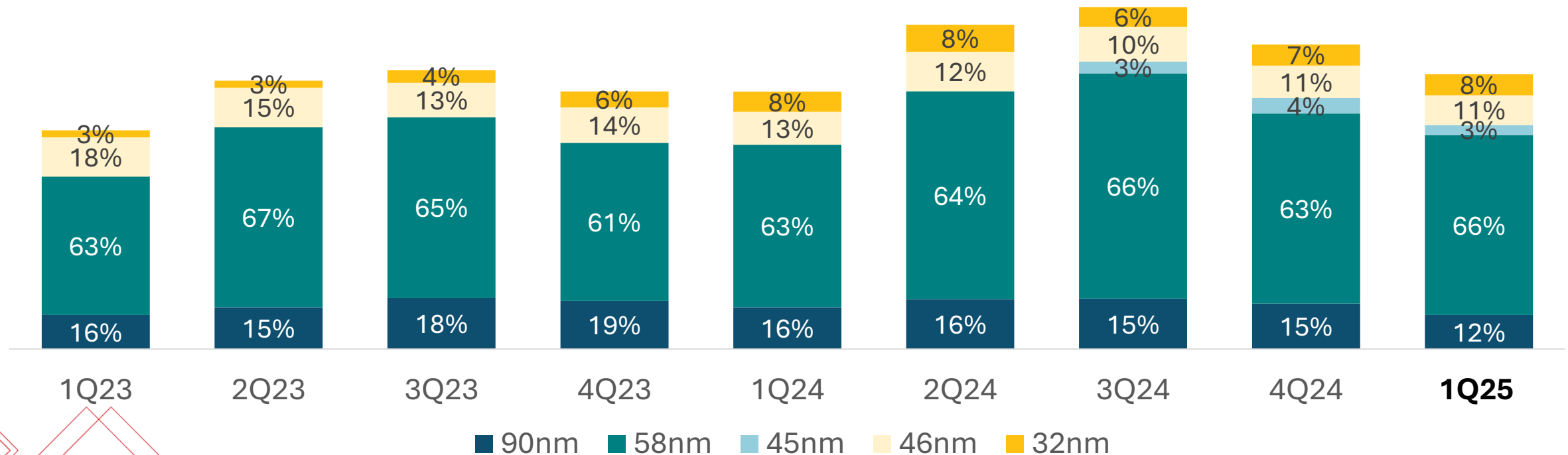
Computer

QoQ -22%

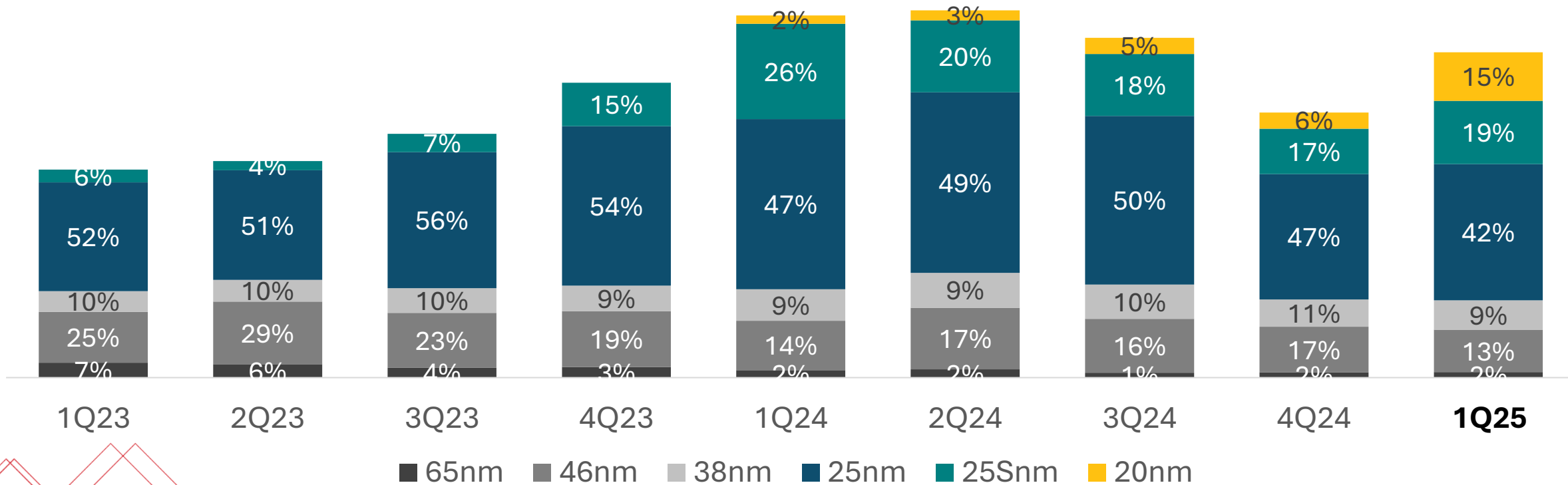


Note: Rev excluded foundry and others

- ❑ Revenue in 1Q25 decreased by 10% QoQ but increased by 5% YoY
- ❑ 1Q25 NOR Flash bit shipment increased in the low-teens% range YoY
- ❑ 1Q25 SLC NAND bit shipment from density $\geq 4\text{Gb}$ increased more than doubled YoY
- ❑ Stably leading as WW No.1 NOR Flash supplier



- Revenue in 1Q25 increased by 23% QoQ but decreased by 8% YoY
- Bit shipment in 1Q25 decreased in the low-teens% range YoY
- Revenue contribution from 20nm surged in 1Q25, driven by DDR3 and DDR4 growth



❑ Code Storage Flash

- Demand for NOR recovers in 2Q25, with a balanced supply-demand throughout 2025
- Supply for SLC NAND is anticipated to tighten in 2025 due to decreasing output from major suppliers
- Growing demand: Automotive, Wearable; Healthy demand: PC/NB, Smart Home

❑ Customized Memory Solution

- Oversupply may improve with growing demand and potential rush orders in 2Q25
- The recovery in prices of DDR3 and DDR4 continues
- Positive demand for LPDDR4 across multiple applications: TV, Smart Home, Automotive and Drone, etc.

❑ Overall Market

- The ongoing volatility of the global economic environment brings uncertainty to the end markets
- Taiwanese manufacturers may benefit from the US-China tariff war in the short-term
- Long-term demand outlook for memory remains steady, driven by robust AI-driven industry transformation

❑ Winbond Business

- Revenue contribution from 20nm CMS kept increasing, with the next-generation 16nm technologies on track
- 24nm NAND Flash process has entered mass production
- 4Gb and 8Gb LPDDR4 series will be the focus in 2025
- CUBE: continuously expand applications and provide solid solutions for customers
- Listed as a “Top 100 Global Innovators” by Clarivate for three consecutive years

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Excellence & Forward

- Secure Flash Business Update

NOR Flash

512Kb~2Gb

NAND Flash

512Mb~8Gb

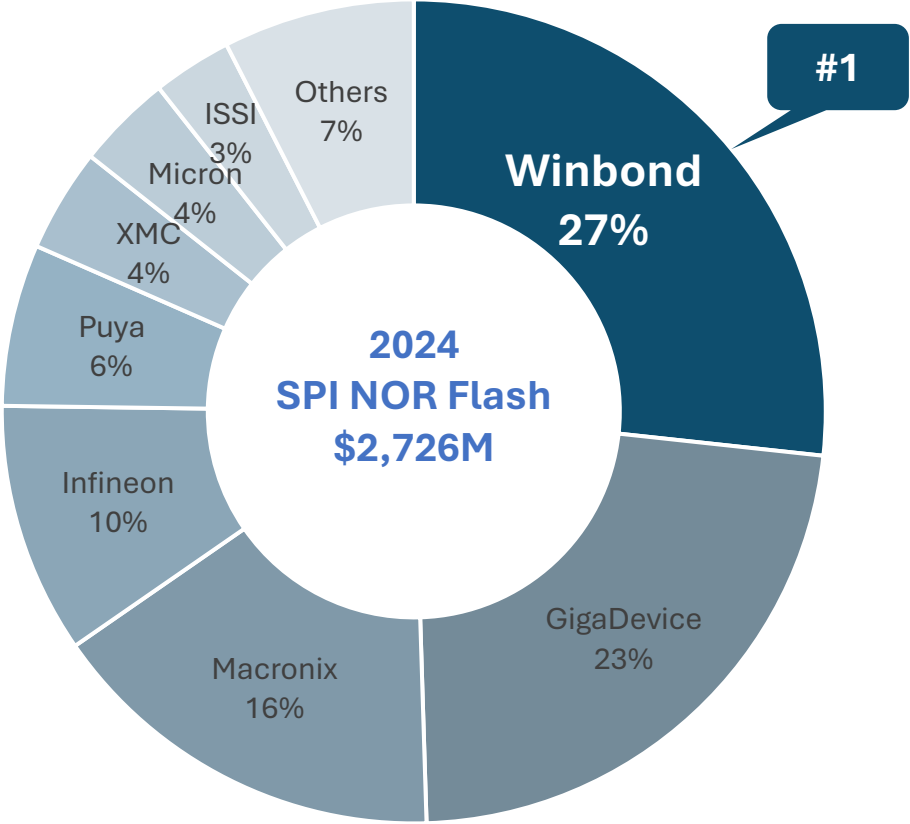
Secure Flash

4Mb~1Gb

Product Application	QSPI NOR - 1.2/1.8/3V Octal NOR - 1.8V	QSPI NAND - 1.8/3V Octal NAND - 1.8V ONFI NAND - 1.8/3V MCP	QSPI Secure Flash - 1.8/3V Octal PQC Secure Flash - 1.8V
Computing	AI Server PC, Notebook HDD, Peripherals	HDD	Server Supply Chain Protection SmartNIC
Consumer	TWS, GPS, Wearable Gaming AMOLED, TV	Healthcare with AI Enabled AR/VR Smart Speaker	“RED” and “CRA” Compliant Products
Communication	IoT Connectivity 5G base station Satellite communication	WiFi6/7, M2M Module, FWA, Switch GPON/xDSL IPCam	iSIM on mobile phone (EAL5+) Enterprise Switch
Automotive	Cluster, eCockpit ADAS, DMS Camera, Ladar/Lidar	ADAS, DMS	Autonomous Driving
Industrial Control	Medical Utility Meters, Surveillance IPC, PLC, Factory Automation	Surveillance Camera Factory Automation	IPC Industrial Gateway Medical

SPI NOR Flash

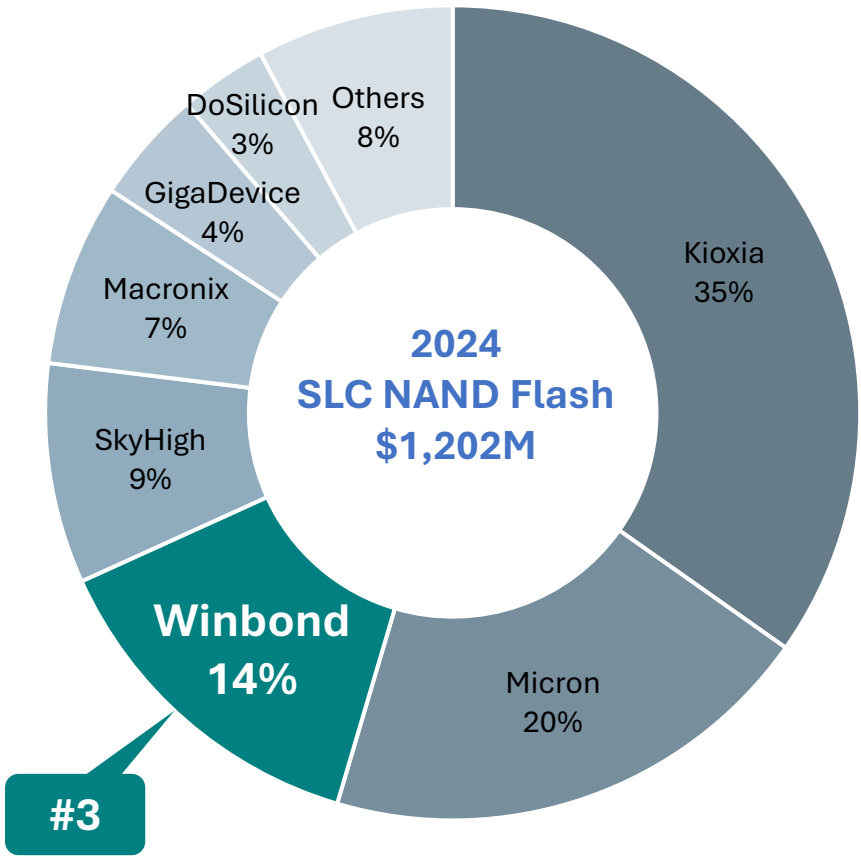
(Revenue \$USD)



Source: Omdia, Mobile and Embedded Memory Market Tracker – 4Q24 Database, March 2025

SLC NAND Flash

(Revenue \$USD)



Source: Individual company, TrendForce, Omdia, Winbond

1. Infrastructure Protection
2. Network Security
3. Endpoint Security
4. Data Security
5. Application Security
6. Cloud Security
7. Other Solutions

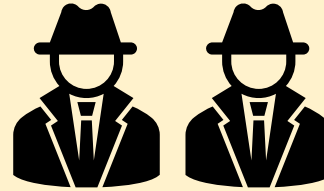
} Hardware Cybersecurity and Code/Data Storage Protection Required- Focus of Winbond

From various reports, the market size by software and service of the cybersecurity industry is > \$250 billion with a CAGR of > 12% in the coming years.

Key Drivers of CyberSecurity Market

Elevated cybersecurity threats

A new type of attacks sponsored by **Governments**

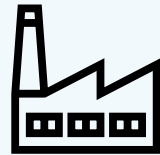


Increasing number of cybersecurity attacks by **Criminals**



Rapid adaptation of various IoT Edge-connected devices

Industrial



Consumer



Automotive



Regulatory Compliance and Industry Standard

Singapore



US



EU (RED)



PQC



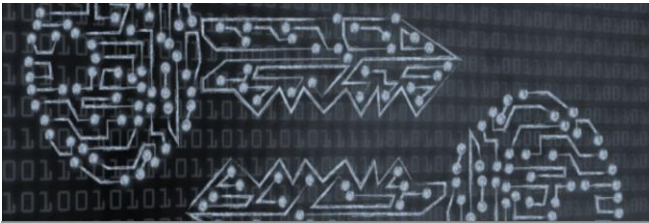
ISO/SAE 21434



ISA/IEC 62443



Post-Quantum Cryptography



Supply Chain Protection



Cybersecurity Regulations



Cloud and AI



Quantum Computers will be available on a small scale in 2030



Consumer IoT



2030 is the last year when traditional cryptography will be valid



Industrial IoT



US NSA mandates(CNSA 2.0) immediate transition to PQC for Software update signatures



Automotive IoT



Unsecure supply chain is defined as threat #1 in the US and EU.

Government-sponsored attacks on a supply chain may cause significant damage to economy and companies Biz models



Enforced security regulations for IoT, Automotive and Industrial products













































EU CRA, EU RED
US FCC Cyber Mark
Taiwan TEEMA SSIPS
IEC62443 Industrial Cybersecurity

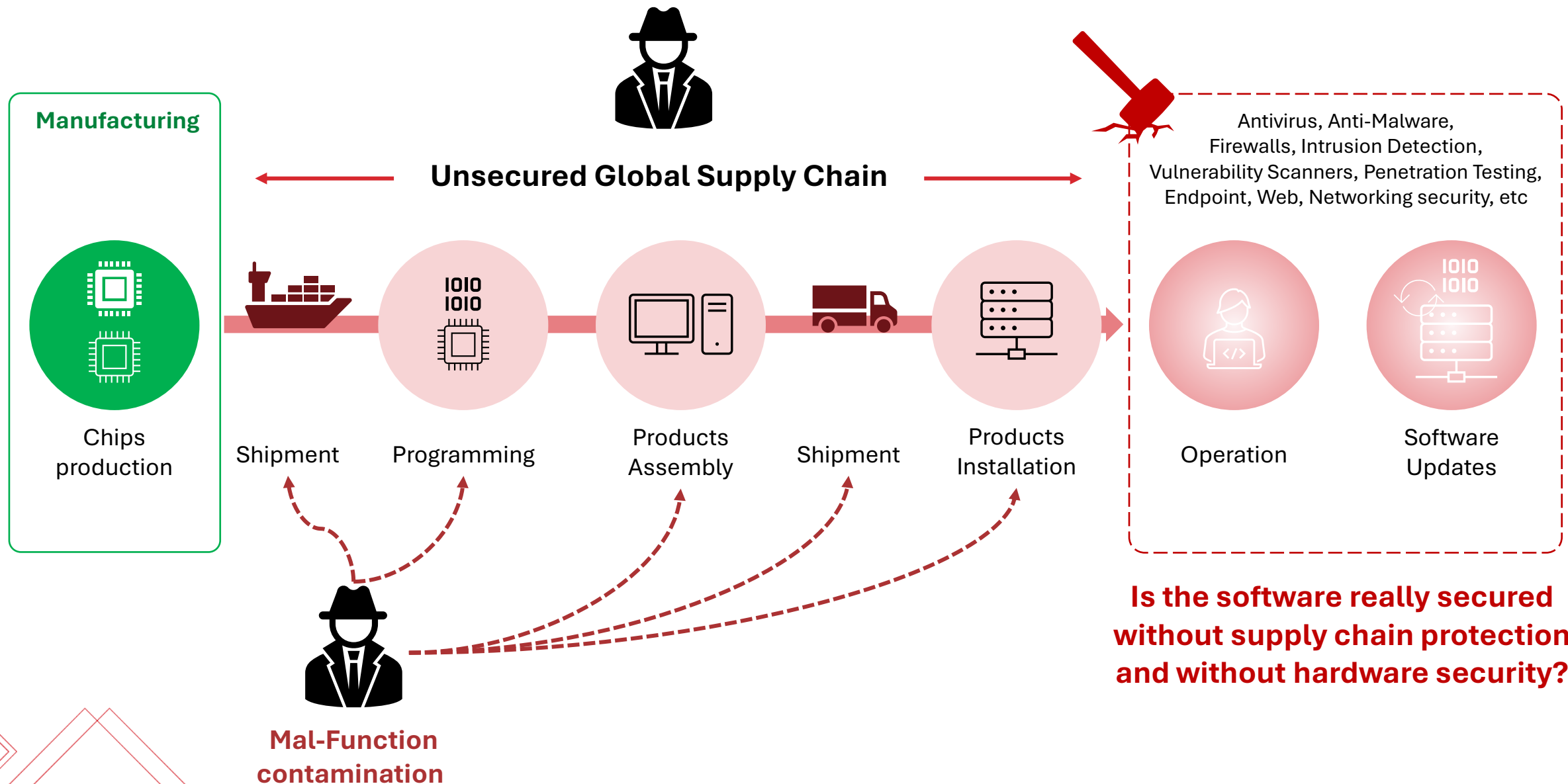


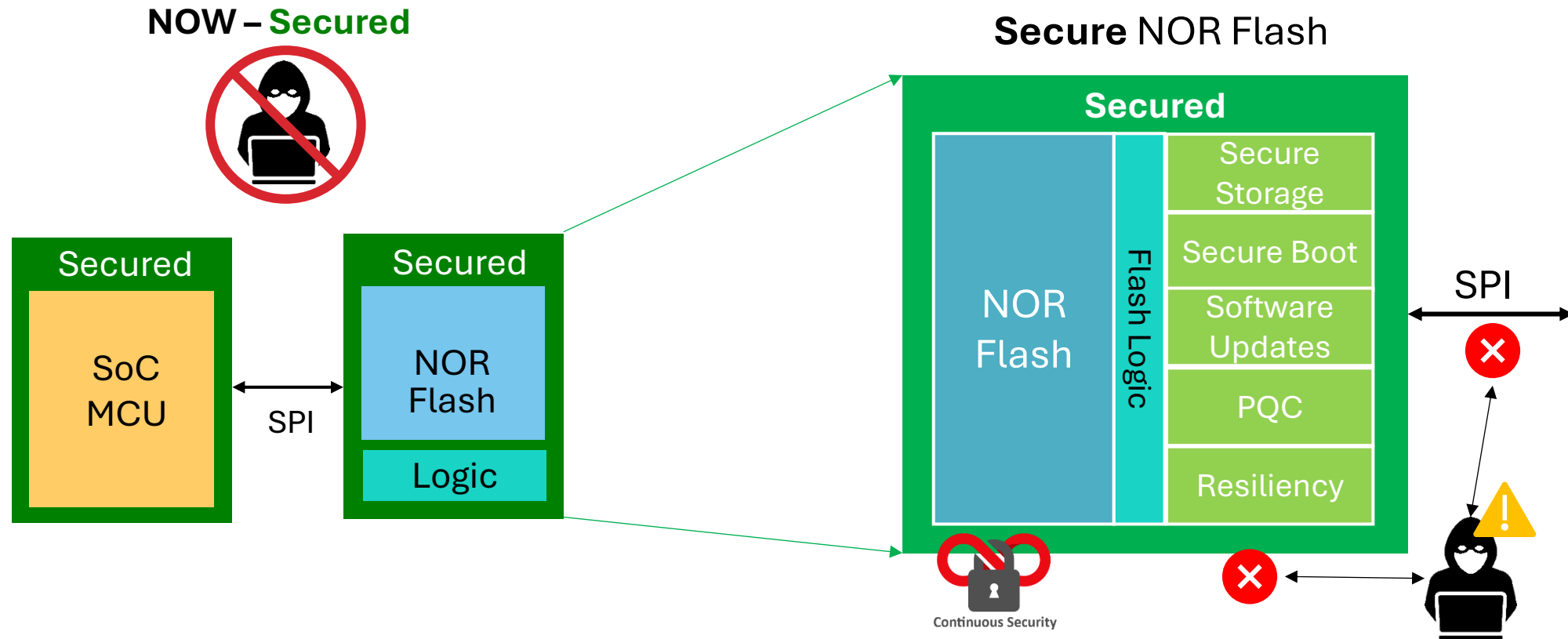
ISO21434 for Automotive



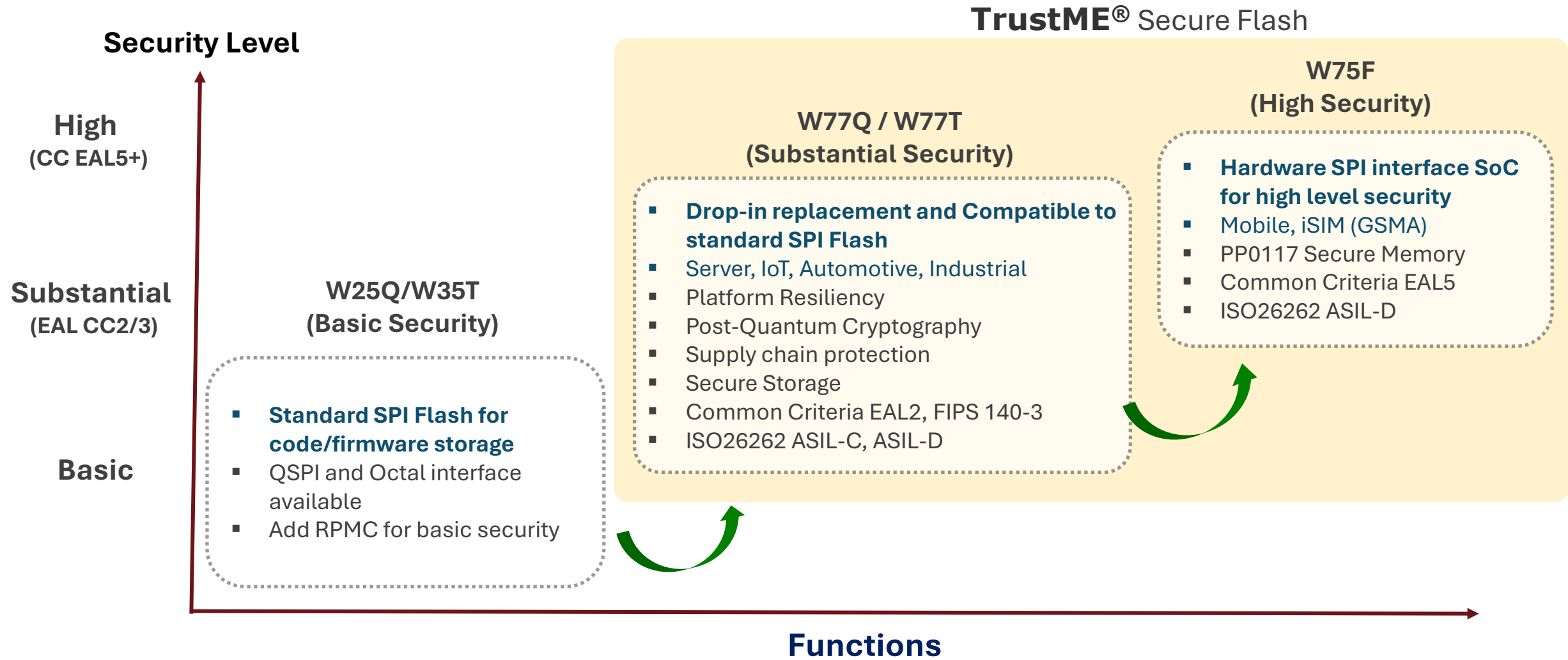
		Post-Quantum Cryptography	Supply Chain Protection	Cybersecurity Regulations
Cloud and AI		Remote attestation based on PQC   	Flash Manufacturing in a secured and certified fab Remote attestation	Secure boot, Platform Resiliency with Automatic recovery    
Consumer IoT		Secure Storage for Keys    	  	Secure storage for Privacy  
Industrial IoT		Secure Software updates with PQC signatures	Secure Storage for credentials and signatures    	Software Updates    
Automotive IoT		Platform Maintenance with PQC keys replacement    	Flash-to-cloud channel    	Events logging ("black box")  
				Conformance, Certifications    

Hardware Security, in addition to Software Security





Complete platform protection
by secure SoC/MCU and Secure
NVM

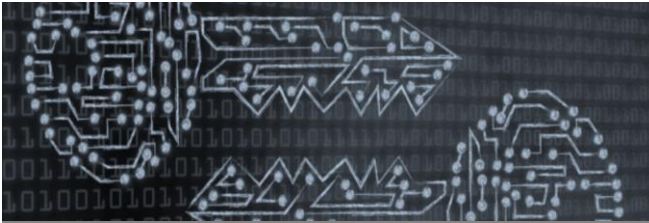


Uniqueness of Winbond TrustME® Secure Flash Products

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Post-Quantum Cryptography



Supply Chain Protection



Cybersecurity Regulations



Basic Features

- Secure Storage for credentials and signatures

- Secure boot
- Secure storage for Privacy
- Software OTA updates
- Platform Resiliency with Automatic Recovery

Unique Winbond Features

- 1st Flash vendor to support the PQC
- Remote attestation based on PQC
- Secure Software updates with PQC signatures

- Remote attestation
- Flash-to-cloud channel
- Flash Manufacturing in secured and certified fab

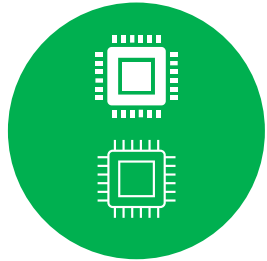
- Hardware Events logging (“black box”)
- Conformance, Certifications
- Turn-Key solutions, including Software

Winbond Secure Flash Protects Your Products

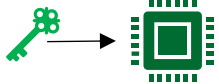
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1 Chip Production

Winbond Secure and Certified Manufacturing



Chips production

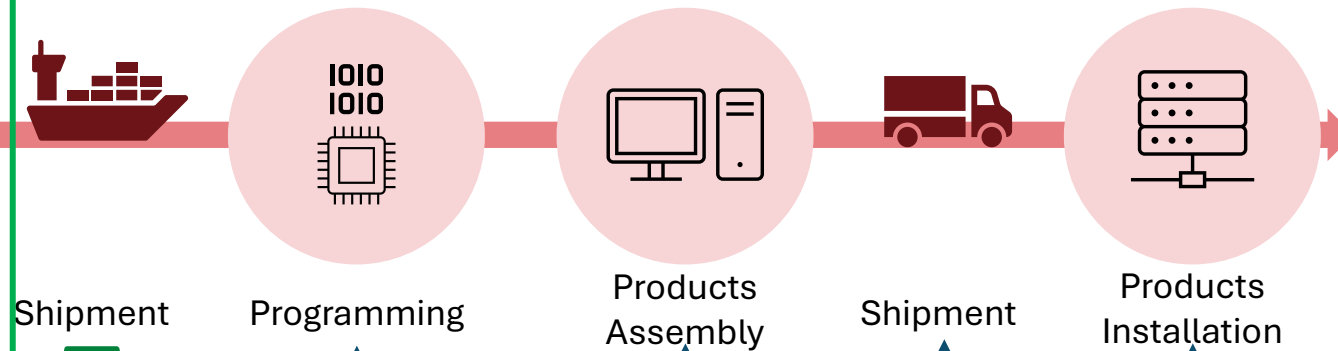


2 Programming & Assembly

3 Shipment & Installation

4 Operation & Software Update

Existing Supply chain – no need to change



Shipment

Programming

Products Assembly

Shipment

Products Installation

Winbond W77Q Secure Flash creates a shield for your existing supply chain. SESIP Certified.

Remote Attestation of Platform based on Post-Quantum Cryptography, and Full Platform traceability.

Software Cybersecurity tools Regulations: RED, CRA, etc



Operation



Software Updates

RED Compliance, Secure OTA with PQC, Hardware security

Attestation and OTA server



Alerting on every attempt for hardware or software contamination, falsification, data breach, etc



	Cloud and AI	IoT	Automotive
Applications	<ul style="list-style-type: none">• Servers• AI accelerators• Enterprise Networking• Enterprise PC	<ul style="list-style-type: none">• Industrial controls• Enterprise equipment• Medical• Consumer• Networking	<ul style="list-style-type: none">• Telematics• Autonomous AI driving• Public transportation
Successful cases	<ul style="list-style-type: none">• SmartNIC• Router• AI server	<ul style="list-style-type: none">• Industrial PC• Enterprise Video Conference• Docking Station• IoT Connectivity Device	<ul style="list-style-type: none">• Train controls• Navigation• Automotive eCockpit

❑ From 2024, the demand for Secure Flash is getting significantly increased by

- Supply Chain Protection from Server eco-system and Automotive, especially with PQC support
- Regulatory and standard demand from EU “RED” and “CRA”, US CSNA 2.0, Industrial Cybersecurity IEC62443 and Automotive Cybersecurity ISO21234
- System resilience according to the increasing potential threats

❑ By this increasing demand and successful cases

- We expect a certain percentage of the existing business of NOR flash will migrate to secure memory according to the new security requirements
- With the new emerging demand on the Edge and Cloud market, the secure flash business can take >10% of the NOR revenue in 2027, and keep growing

Q & A



Thank you