Q1 2025 Investor Conference

May 9th, 2025

Embedded Wisely, Embedded Widely

ememory

IPR Notice

Cautionary Statement

This presentation contains forward-looking statements, which are subject to risk factors associated with semiconductor and intellectual property business. It is believed that the expectations reflected in these statements are reasonable. But they may be affected by a variety of variables, many of which are beyond our control. These variables could cause actual results or trends to differ materially which include, but are not limited to: wafer price fluctuation, actual demand, rapid technology change, delays or failures of customers' tape-outs into wafer production, our ability to negotiate, monitor and enforce agreements for the determination and payment of royalties, any bug or fault in our technology which leads to significant damage to our technology and reputation, actual or potential litigation, semiconductor industry cycle and general economic conditions. Except as required by law, eMemory undertakes no obligation to update or revise any forward-looking statements, whether as a result of new information, future events, or otherwise.

Contents

Review of Operations

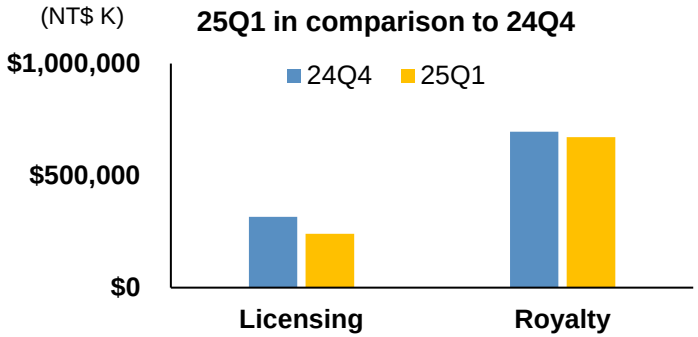
Q1 2025 **Financial Results**

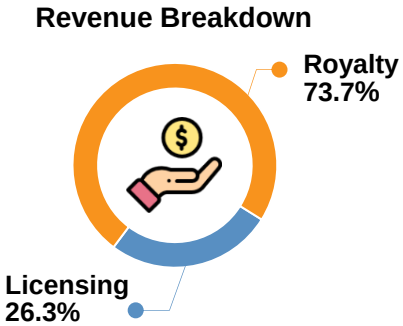
(thousands of NT dollars)

	Q1 2025	Q4 2024	QoQ	Q1 2024	YoY
Revenue	911,734	1,010,717	-9.8%	802,764	13.6%
Gross Margin	100%	100%	-	100%	-
Operating Expenses	389,387	444,784	-12.5%	382,143	1.9%
Operating Income	522,347	565,933	-7.7%	420,621	24.2%
Operating Margin	57.3%	56.0%	1.3ppts	52.4%	4.9ppts
Net Foreign Exchange Gain	12,151	37,262	-67.4%	69,516	-82.5%
*Net Income	461,706	514,608	-10.3%	430,577	7.2%
Net Margin	49.8%	51.1%	-1.3ppts	52.7%	-2.9ppts
EPS (NT$)	6.18	6.89	-10.3%	5.77	7.1%
ROE	48.7%	62.5%	-13.8ppts	53.2%	-4.5ppts

*Net income attributable to Shareholders of the Company

Revenue across **Different Streams**





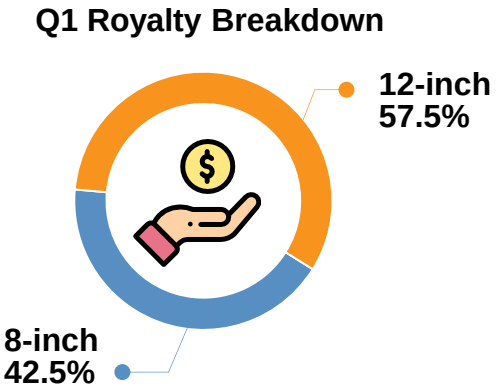
Revenue

NT$ Thousands	Q1 2025	Q4 2024	QoQ	Q1 2024	YoY
Licensing	240,217	315,330	-23.8%	228,329	5.2%
Royalty	671,517	695,387	-3.4%	574,435	16.9%
Total	911,734	1,010,717	-9.8%	802,764	13.6%

Revenue by **Technology**

Technology	Q1 2025								
	Total Revenue			Licensing Revenue			Royalty Revenue		
	% of Q1 Revenue	QoQ	YoY	% of Q1 Licensing	QoQ	YoY	% of Q1 Royalty	QoQ	YoY
NeoBit	25.0%	-4.5%	19.8%	23.6%	-14.0%	18.7%	25.4%	-0.8%	20.2%
NeoFuse	66.2%	-4.4%	12.3%	49.1%	-4.3%	-1.7%	72.4%	-4.4%	16.3%
PUF-Based	1.9%	-75.7%	-4.3%	7.0%	-76.4%	-7.4%	0.1%	1.7%	542.2%
MTP	6.9%	-8.7%	10.7%	20.3%	-11.1%	14.9%	2.1%	0.2%	-1.6%

Royalty Revenue by **Wafer Size**



- 8-inch wafers contributed 42.5% of royalty, up 0.6% sequentially and up 16.1% yearly.
- 12-inch wafers contributed 57.5% of royalty, down 6.2% sequentially but up 17.5% yearly.

Wafer Size	Q1 2025		
	% of Q1	QoQ	YoY
8-Inch	42.5%	0.6%	16.1%
12-Inch	57.5%	-6.2%	17.5%

Future Outlook

Future Outlook

Licensing & Royalty:

- **Licensing:**
  - Driven by strong demand from foundries and end chip customers coupled with an expanding portfolio of process platforms and more advanced NVM and security-related IP, we expect licensing fees to maintain sustained growth momentum.

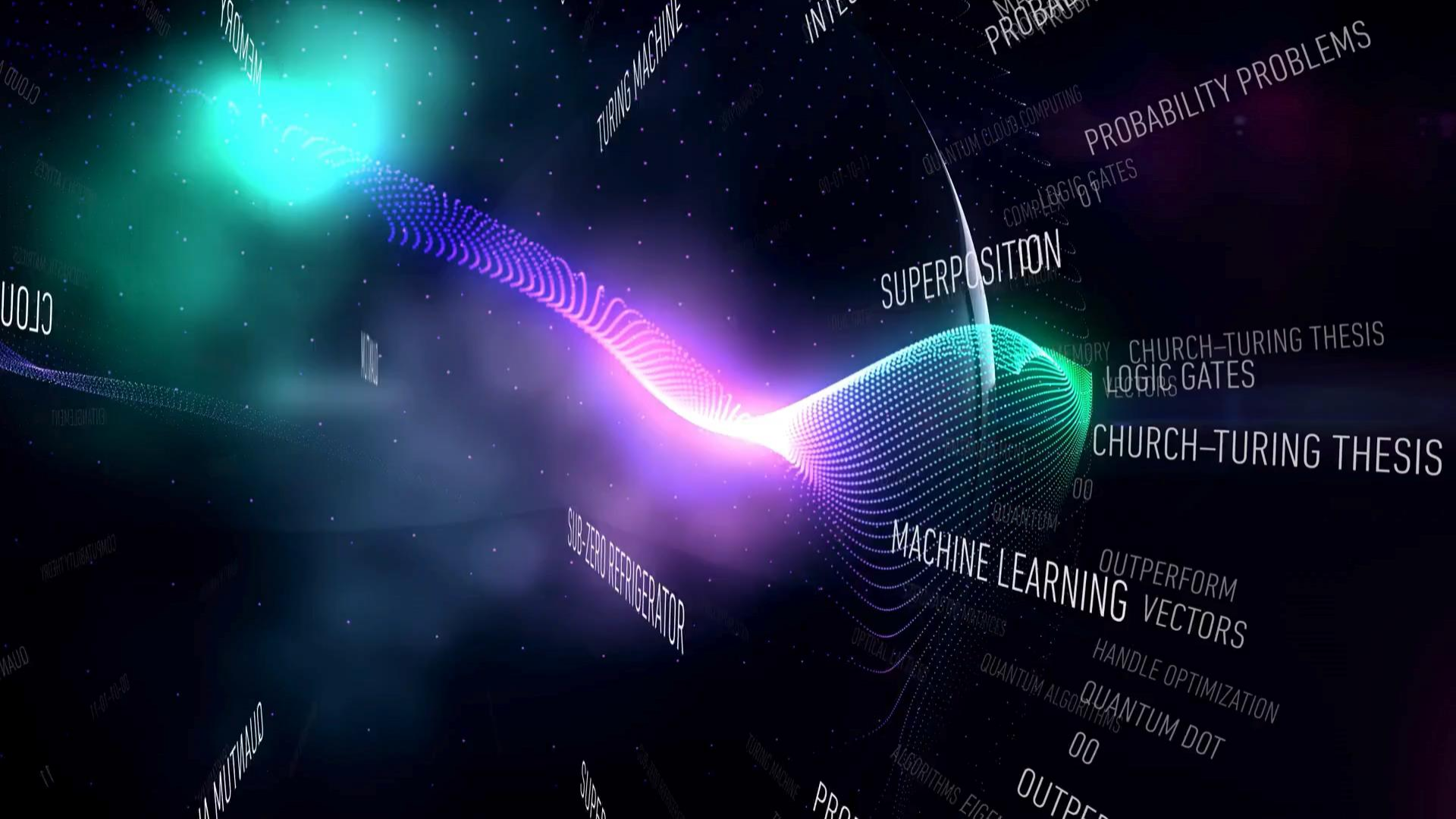
- **Royalties:**
  - We expect royalty revenue to continue its growth trend as the accumulated tape outs in advanced process nodes enter the production stage, along with continued market share gains in mature applications.

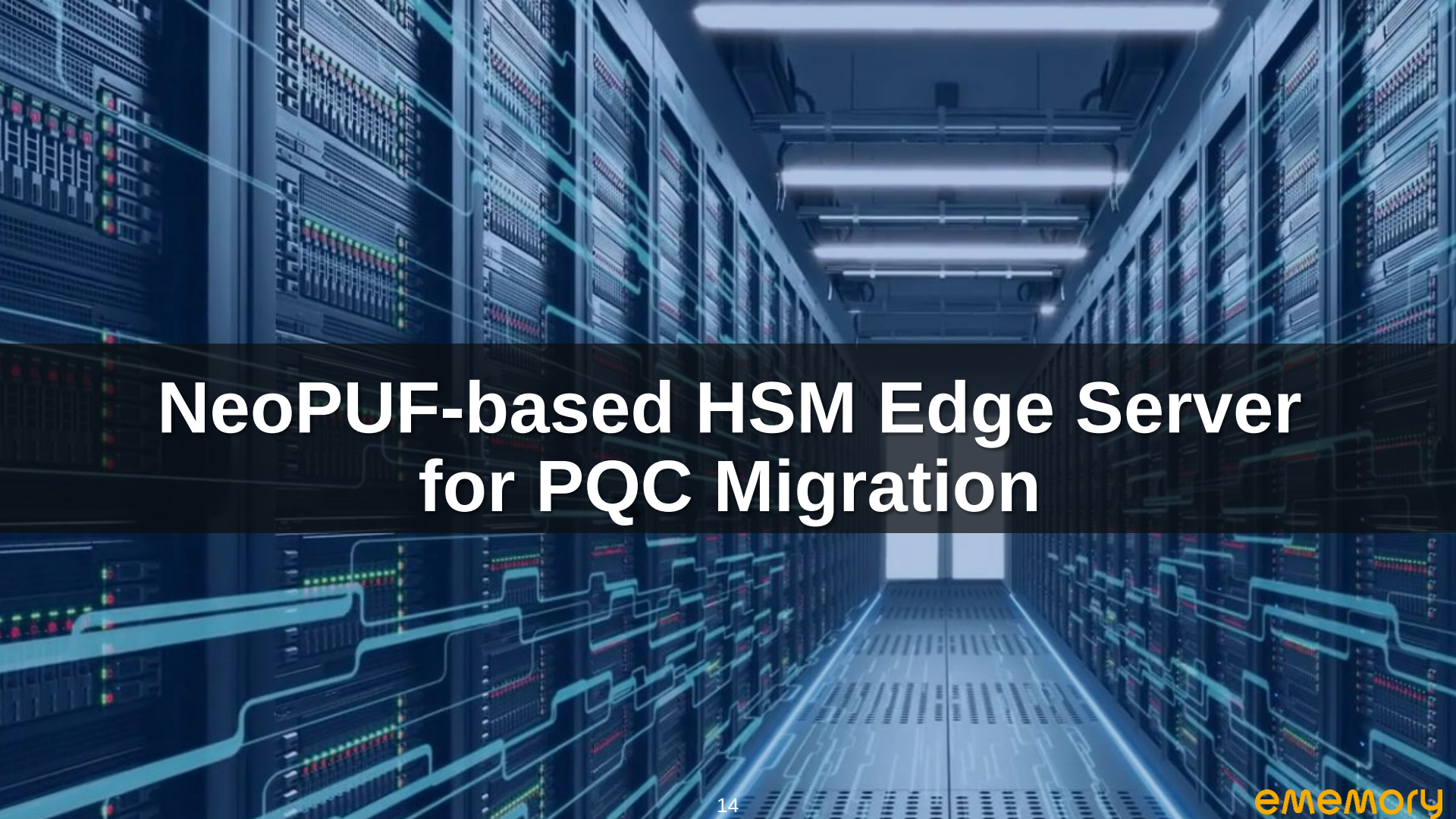
Future Outlook

New IP Technology & Business Development:

- **New IP Technologies:**
  - We are developing post-quantum cryptography (PQC) modules and expanding into a full suite of solutions—from PUFrt to PQC PUFcc and PQC PUFhsm—to build the foundational hardware security cores needed for the upcoming decade of quantum migration.

- **Business Development Platform:**
  - Following our recognition as TSMC OIP's Best Embedded Memory IP Partner, we joined the Intel Chiplet Alliance, integrating our OTP/PUF technologies to become a key enabler of Intel's U.S.-based chiplet security innovation solutions.
  - At the upcoming Computex, we launched the PUF-based HSM edge server, which serves as the cornerstone of our Security as a Service platform strategy.


PROBABILITY PROBLEMS
SUPERPOSITION
CHURCH–TURING THESIS
LOGIC GATES
CHURCH–TURING THESIS
MACHINE LEARNING
VECTORS
OUTPERFORM
HANDLE OPTIMIZATION
QUANTUM DOT
SUB-ZERO REFRIGERATOR
TURING MACHINE



NeoPUF-based HSM Edge Server for PQC Migration

Why Migrate to PQC ?

Future-Proof Security for the Quantum Era

Eliminate risks posed by quantum computing threats

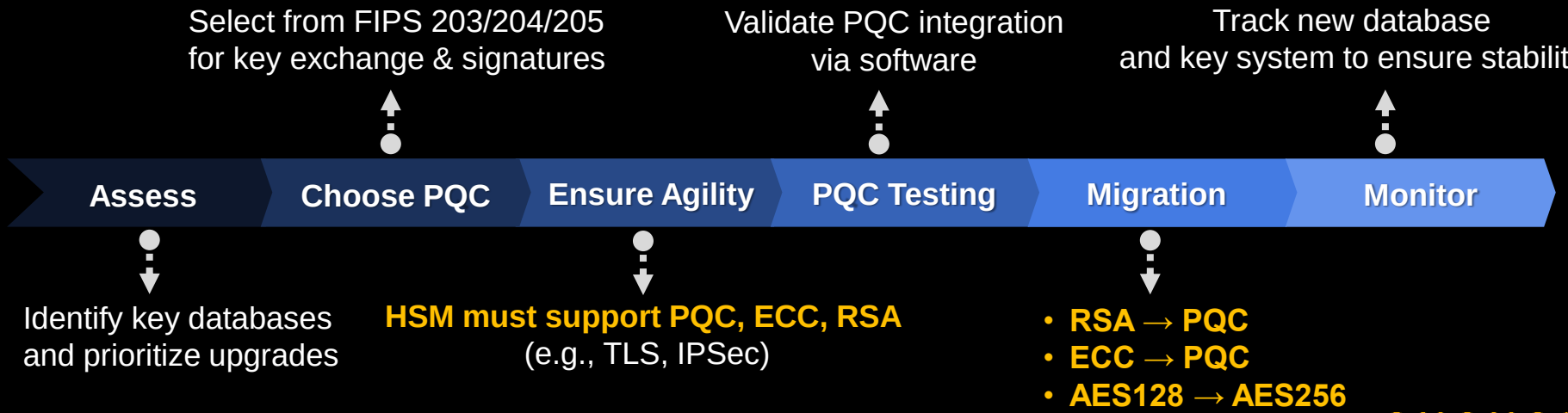
Adopt PQC-Ready HSM Edge Servers

Support both RSA/ECC and PQC crypto algorithms

PQC Migration Steps & Scope

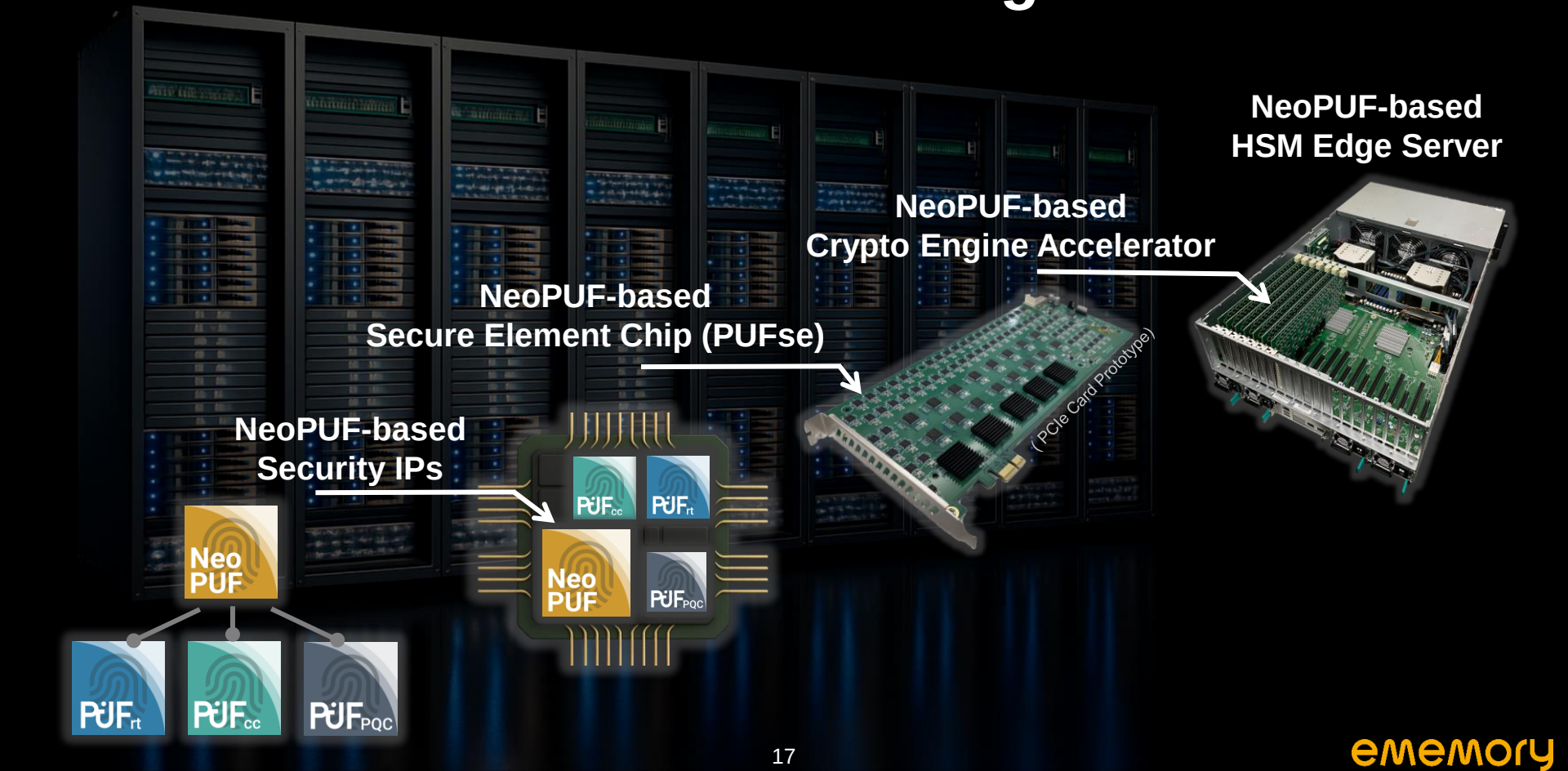
Key Principles:

- Execute Clear Migration Steps
- Prioritize Critical Digital Assets
- Deploy PQC-ready HSM Edge Servers



ememory

NeoPUF-based HSM Edge Server



ememory

NeoPUF-based HSM Edge Server Applications

Financial Services & Banking

E-Commerce & Retail

Healthcare & Pharmaceuticals

Government & Public Sector

Telecommunications

Cloud & Data Centers

Automotive & Manufacturing

ememory

NeoPUF-based PQC Security as a Service

PQC FIDO Key & Multi-Factor Authentication (MFA)

User 1
User 2
User 3
.
.
.
User N

Zero-Trust NeoPUF-based PQC Security as a Service

IAM
Identity and Access Management System

***PKI**
CA/RA

CMS
Certificate Management System

KMS
Key Management System

NeoPUF-based HSM Edge Server

For Various Applications

Applications

*Note — PKI: public key infrastructure / CA: certificate authority / RA: registration authority

ememory

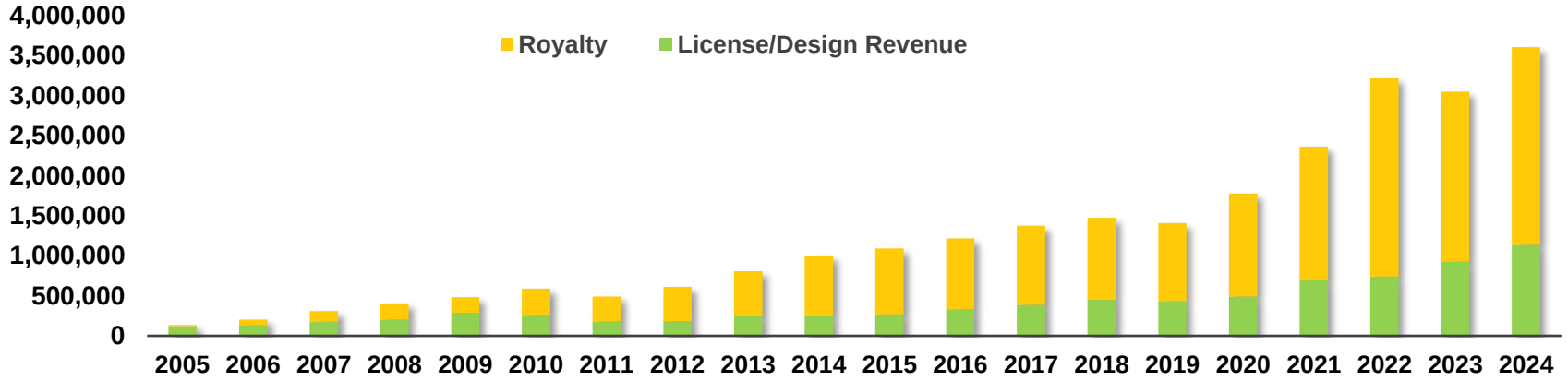
Q&A

Appendix

Company Overview

- eMemory is the global leader of embedded non-volatile memory IP

Revenue Trend
(Unit: NT$ 1,000)



Founded
In 2000

Based in Hsinchu, Taiwan. IPO in 2011. Over 67M wafers shipped.

1270+
Patents Issued

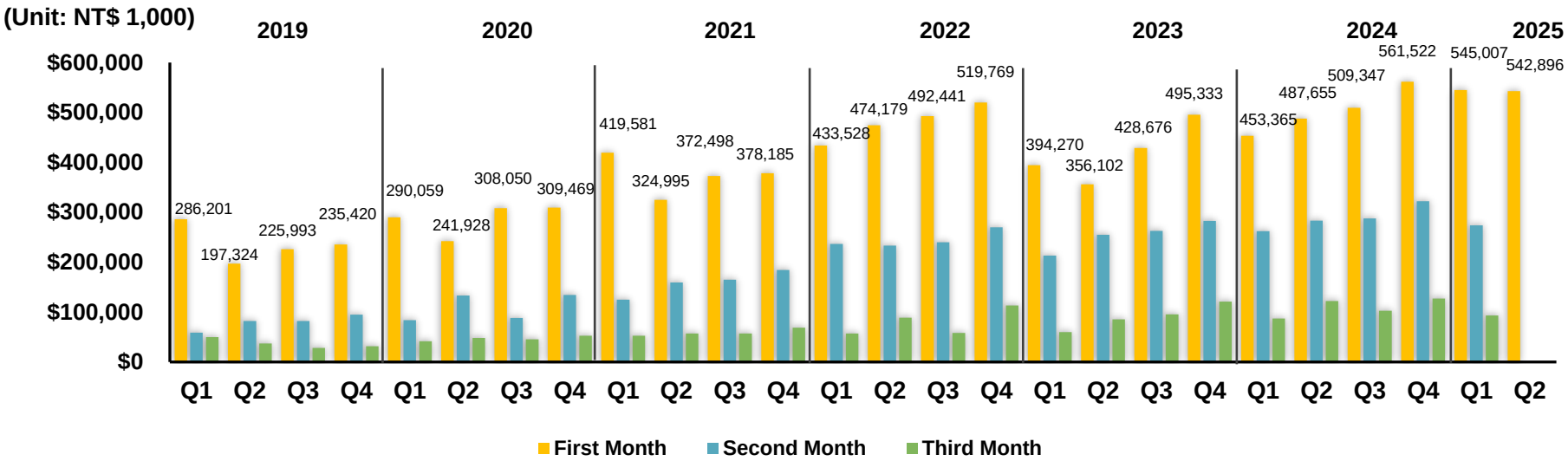
221 pending patents. 367 employees with 68% R&D personnel.

Best IP Partner
With TSMC

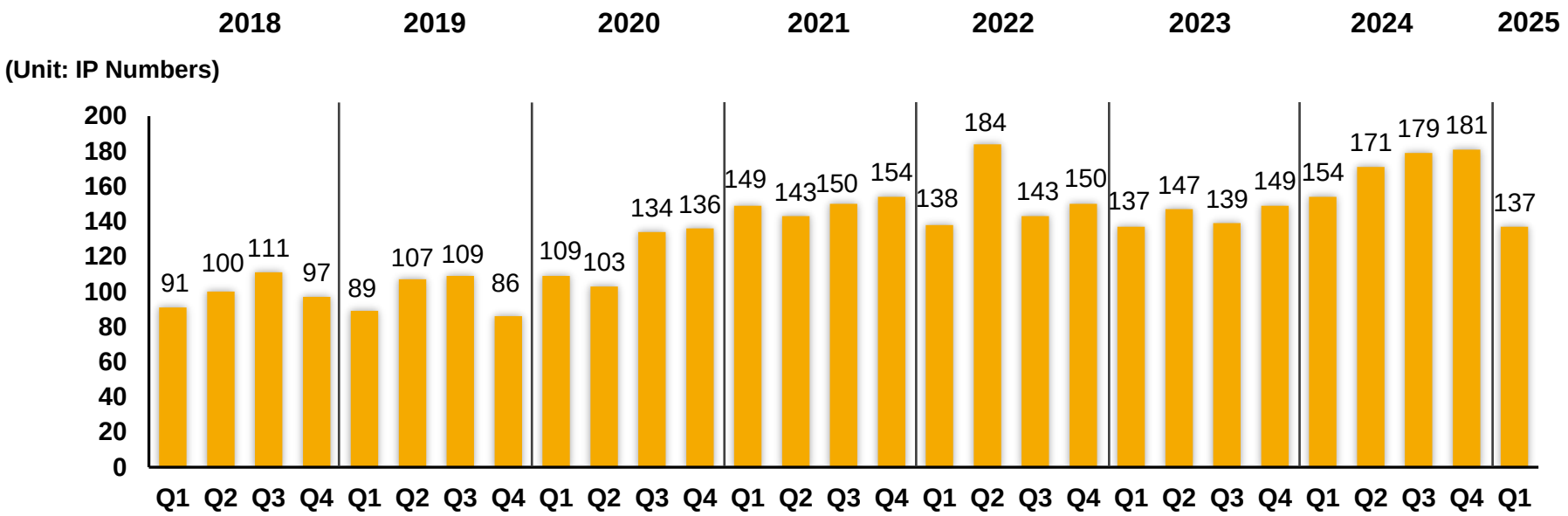
TSMC Best IP Partner Award since 2010.

Quarterly Revenue **Pattern**

- 1st month: Receive License Fees of the month and Royalty from most foundries on previous quarter's wafer shipments.
- 2nd month: Receive License Fees of the month and Royalty from other foundries.
- 3rd month: License Fees Only.



Quarterly Number of **New Tape-outs**



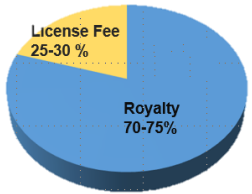
Worldwide Customers

- Our IP solutions are adopted by leading foundries, IDMs and fabless worldwide

Country	Foundry	IDM	Fabless
Taiwan	4	1	350
China	12	0	1361
Korea	4	0	103
Japan	1	9	88
North America	2	2	368
Europe	2	2	237
Others	1	0	127

Business Model

- Recurring royalty is the backbone of our business



Revenue Breakdown

- 70-75% revenue are from royalty based on wafer production
- More adoption = more volume shipment
- More advanced node wafers = higher ASP per wafer

1-4 years

1-4 years

License Fee
Foundries Process Development

Design License Fee
Fabless Product Development

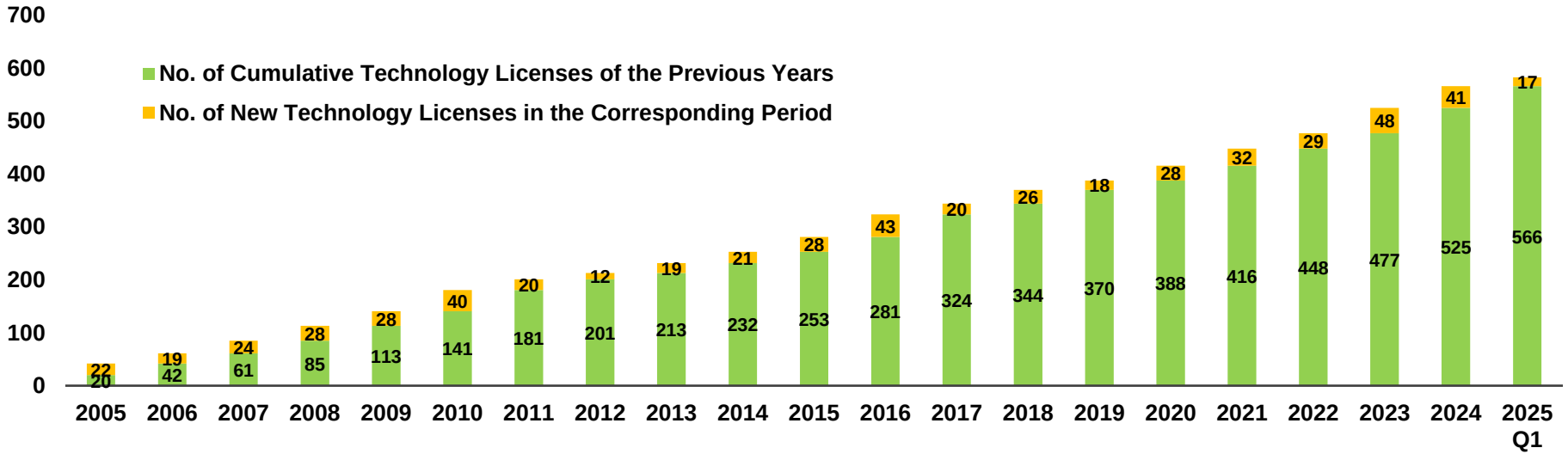
Royalty
Wafer Mass Production

Technology **Licenses**

Number of Licenses

Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025 Q1
License	43	20	26	18	28	32	29	48	41	17

Note: Terms (including number of process platforms and licensing fees) for each technology license are set contractually. Payments are made according to set milestones, and there are no particular seasonal factors involved.



New Technology Under Development

- New technologies are being developed for 188 platforms by Q1 2025.
- 17 licensing contracts were signed.

Technology	2nm	3nm	4/5nm	6/7nm	12/16nm	22/28nm	40nm	55/65nm	80/90nm	0.11~ 0.13um	0.15~ 0.18um	>0.25um
NeoBit	-	-	-	-	-	-	-	1	2	15	11	3
NeoFuse	2	2	1	1	7	23	9	17	9	6	1	-
PUF-Based	-	1	1	1	1	1	-	1	-	1	-	-
MTP	-	-	-	-	1	2	3	11	10	17	27	-

Note: As of March 31st, 2025

Technology Development

- Developments by process nodes

12" Fabs	Production	Development	IP Type	Process Type
2nm	0	2	OTP	Nanosheet
3nm	0	3	OTP, PUF	FF, FFP
4/5nm	6	2	OTP, PUF	FF, FF-Auto
6/7nm	4	2	OTP, PUF	FF, FF+
12/16nm	13	9	OTP, PUF, MTP	FF, FF+, FFC. FFC+, LPP, DRAM, HV
22/28nm	60	26	OTP, PUF, MTP	LP/ULP/ULL, HPC/HPC+, HV-OLED, DRAM, SOI, RRAM, MRAM, E-Flash, BCD, WoW
40nm	26	12	OTP, PUF, MTP	LP/ULP, E-Flash, HV-DDI/OLED, ReRAM, BCD+
55/65nm	62	30	OTP, PUF, MTP	LP/ULP, E-Flash, HV-DDI/OLED, DRAM, CIS, BCD, PM
80/90nm	33	17	OTP, MTP	HV-DDI/OLED, LP, Generic, BCD, CIS
0.11/0.13um	23	9	OTP, MTP	HV-DDI, BCD, Generic
0.15/0.18um	13	15	OTP, MTP	BCD, Generic
Total	240	127		

8" Fabs	Production	Development	IP Type	Process Type
80/90nm	9	4	OTP	HV-DDI, LL, BCD
0.11/0.13um	87	30	OTP, PUF, MTP	HV/HV-MR, BCD, LP/LL, CIS, Green, Flash, SOI, Generic, BiCMOS
0.152/0.16/0.18um	257	24	OTP, MTP	HV/HV-MR, BCD, LP/LL, CIS, Green, Generic
0.25um	42	2	OTP	BCD
0.3/0.35um	53	0	OTP, MTP	UHV, BCD
0.4/0.5um	11	1	OTP	UHV, BCD
Total	459	61		

Note: As of March 31st, 2025

THANKS

Embedded Wisely, Embedded Widely

For more information, please visit:
eMemory Website: https://www.ememory.com.tw/
PUFsecurity Website: https://www.pufsecurity.com/