PHSON Knows What You Need

PCIe Gen 4 Jump Starts Our Sustainable Technology Leadership

KS Pua | Chairman and CEO of Phison Electronics 08/13/2020



2Q20 Investor Presentation

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2Q20 Financial Performance and Business Update



PCIe Gen 4 Breakthrough Expands Our Addressable Market



Current and Future Technology Leadership



What You Need

Our 5-year Vision: To Become the Largest SSD Controller IC Supplier in the World

Enhanced Value for Shareholders

2Q20 Financial Performance and Business Update

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Income Statement Highlight

NT\$mn	2015 201	2016	2017	2019	2019	1Q20	2Q20	YoY (%)						
		2016	2017	2018				2016	2017	2018	2019	1Q20	2Q20	
Revenue	37,409	43,783	41,865	40,788	44,693	12,867	10,855	17.0	-4.4	-2.6	9.6	37.7	11	
Gross Profit	7,627	9,264	11,500	9,132	11,149	3,866	2,673	21.5	24.1	-20.6	22.1	84.5	22.8	
Operating Expenses	- 3,401	- 4,421	- 4,768	- 4,422	- 5,939	- 2,083	-1,593	30.0	7.8	-7.3	34.3	102.8	43.5	
Operating Profit	4,227	4,843	6,732	4,710	5,210	1,783	1,080	14.6	39.0	-30.0	10.6	67.0	1.3	
Pretax Income	4,473	5,477	6,718	5,005	5,351	2,238	1,123	22.4	22.7	-25.5	6.9	115.0	15.1	
Tax Expenses	- 577	- 675	- 957	- 687	- 805	- 340	62	17.1	41.7	-28.2	17.2	113.6	-131.6	
Net Income to Parent	3,896	4,802	5,761	4,318	4,546	1,898	1,185	23.3	20.0	25.0	5.2	115.2	51.7	
Basic EPS (NT\$)	20.41	24.67	29.23	21.91	23.05	9.63	6.00	20.9	18.5	-25.0	5.2	115.4	51.5	
Key Financial Ratios (%)	_													
Gross Margin	20.4	21.2	27.5	22.4	24.9	30.4	24.6				_			
Operating Expense Ratio	9.1	10.1	11.4	10.8	13.3	16.2	14.7							
Operating Margin	11.3	11.1	16.1	11.5	11.7	13.9	10.0				_			
Effect Tax Rate	12.9	12.3	14.2	13.7	15.0	15.2	-5.5							
Net Margin	10.4	11.0	13.8	10.6	10.2	14.8	10.9							

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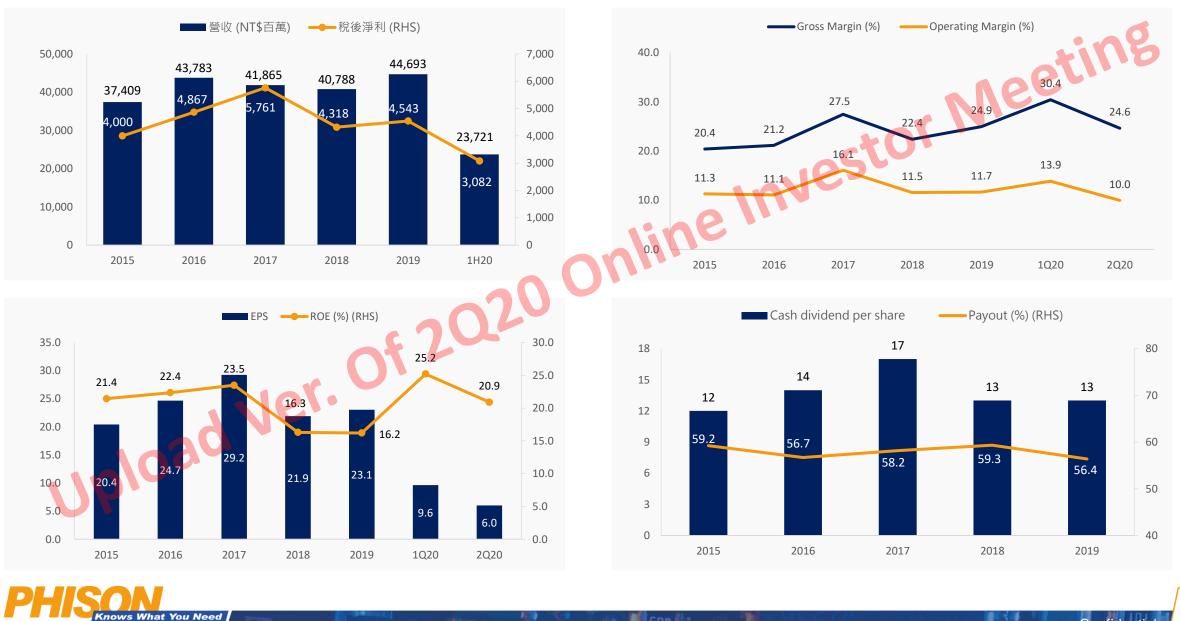
Balance Sheet Highlight

NT\$mn	2015	2016	2017	2018	2019	1Q20	2Q20	YoY (%)					
								2016	2017	2018	2019	1Q20	2Q20
Total Assets	28,419	31,976	35,127	36,439	38,637	41,921	41,310	12.5	9.9	3.7	6.0	7.1	9.2
Cash	12,406	14,958	14,142	14,176	10,205	10,259	11,468	20.6	-5.5	0.2	-28.0	-27.7	-2.3
AR & NR	4,434	4,801	5,731	5,244	5,934	6,968	5,151	8.3	19.4	-8.5	13.2	54.3	3.5
Inventories	5,251	5,222	7,192	7,577	11,533	13,172	13,062	-0.6	37.7	5.3	52.2	24.9	19.2
Fixed Assets	1,637	2,426	2,823	2,990	3,283	3,391	3,714	48.2	16.3	5.9	9.8	13.1	24.1
Total Liabilities	7,869	8,977	9,069	9,527	9,448	10,793	11,461	14.1	1.0	5.1	-0.8	-3.8	-1.8
AP & NP	4,256	3,857	3,647	4,806	3,643	3,734	2,498	-9.4	-5.4	31.8	-24.2	-42.3	-47.7
Total Equity	20,550	22,998	26,058	26,912	29,189	31,128	29,849	11.9	13.3	3.3	8.5	11.5	14.1
Key Financial Ratios													
A/R Turnover Days	41.4	38.5	45.9	48.4	45.6	45.7	42.6						
Inventory Turnover Days	66.1	55.4	74.6	85.1	104.0	125.9	131.3						
A/P Turnover Days	50.9	42.9	45.1	48.7	46.0	37.6	32.7						
Cash Conversion Days	56.6	51.0	75.4	84.8	103.6	134.0	141.2						
ROE (%)	20.9	22.1	23.5	16.3	16.2	25.2	20.9						
ROA (%)	15.0	15.9	17.2	12.1	12.1	18.9	15.4						



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Growing Profitability and Attractive Shareholder Returns



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Quarterly Business Update

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Annual Cumulative Total Bit Shipment: 17.3% YoY SSD + eMMC Controller Shipment 38% YoY PCIe SSD Controller Shipment 111% YoY

Controller IC



Record-high 1H SSD controller IC sales assisted by strong Gen 4 demand

- Expect sequential PCIe sales growth in 2H20 as our Gen 4 technology leadership continues
- First company to deliver Gen 4 IP to customers

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Licensing

- Licensing world's leading Gen 4 IP with more than 90% gross margin
- Expect more ASIC design services

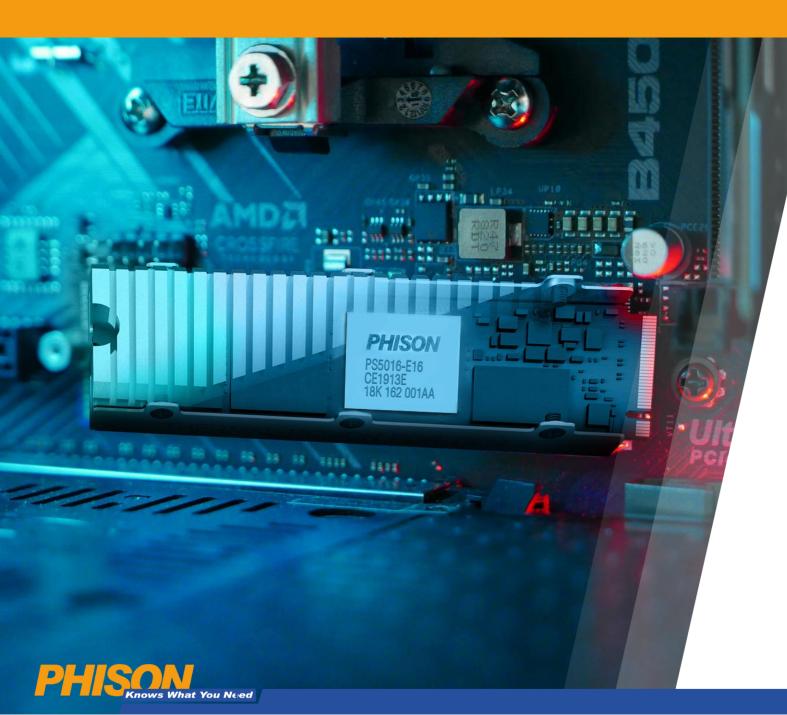


- Industrial: strong demand from medical device makers
- Automotive: expect Strong demand from EV infrastructure customers
- Data Center: focus on legacy enterprise applications



- eMMC and UFS: expect new growth in 5G mobile devices
- Expect new gaming console demand in 2H20 led by Gen 4 technology
- Expect sequential gaming PC sales growth in 2H20







PCle Gen 4 Breakthrough Expands Our Addressable Market



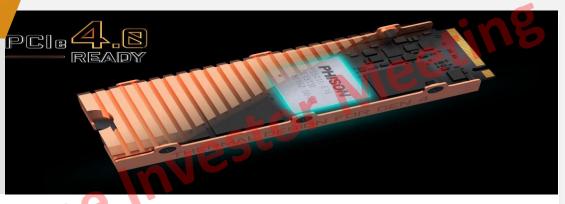
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One-Year Ahead of Competitors' PCIe Gen 4 Solutions

We Are The World Leader of PCIe Gen 4 Solution





- 12 months lead in technology
- 18 months break even period

Design-Win for AMD PCIe Gen 4



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RYZEN CPU & Motherboard The world's first PC platform to support PCIe Gen 4 connectivity.

Investment for Technology Leadership



US\$25mn R&D investment for AMD PCIe Gen 4

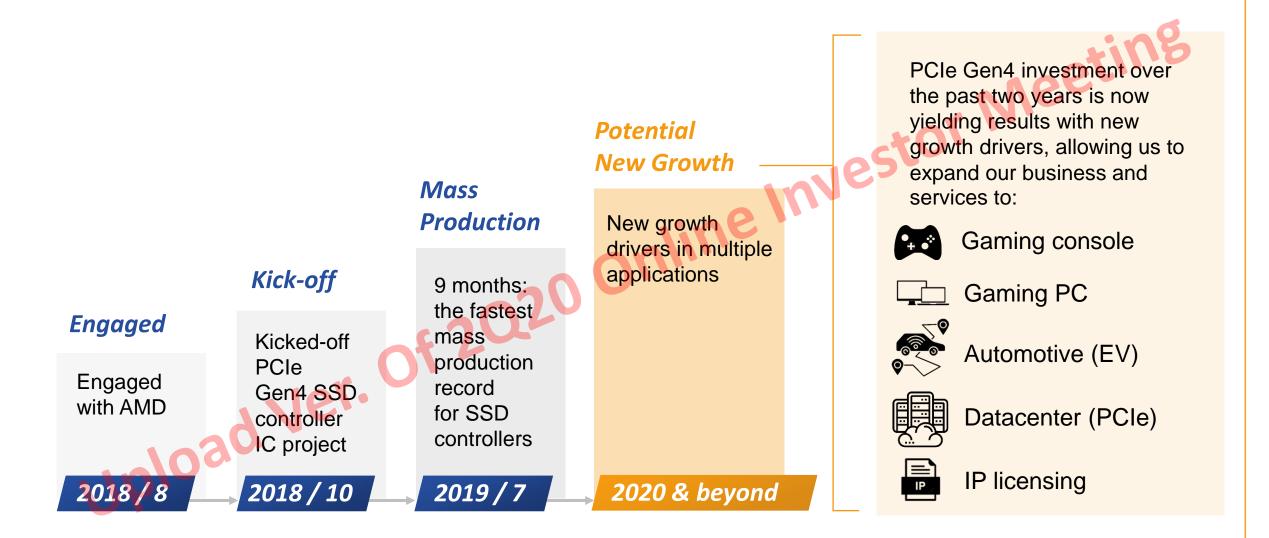
150 R&D engineers for AMD PCIe Gen 4

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Gen 4 Design-win Opens Door to More Opportunities

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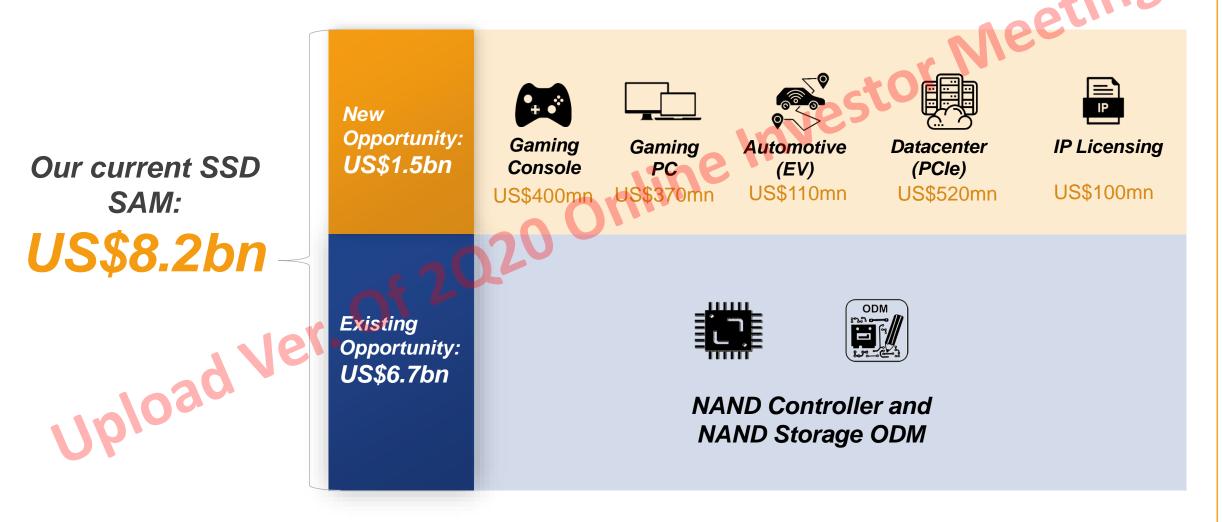
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Gen 4 to Expand Our Serviceable Addressable Market

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PCIe Gen 4 expands our current SSD serviceable addressable market (SAM) from US\$6.7bn to US\$8.2bn. Our new market opportunity is US\$1.5bn, including gaming, PC OEM, automotive, datacenter and IP licensing.





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Current and Future Technology Leadership

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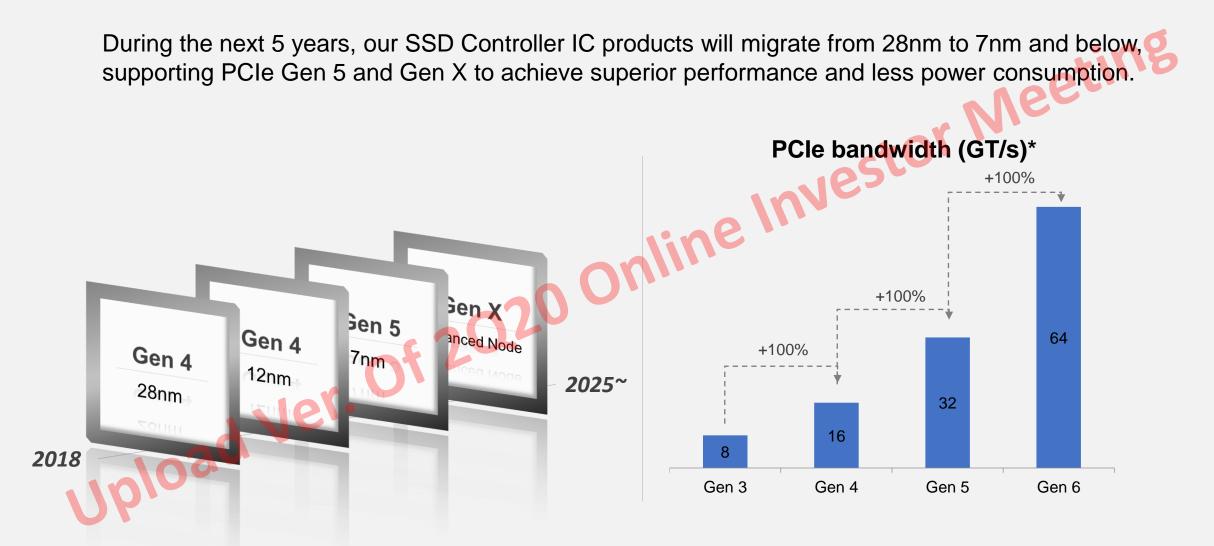
Continue to Fortify Our Leading Technology Position

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Our average R&D intensity of 37%* is higher than peers average of 22%**. We will continue to allocate resources to technology development by maintaining industry-leading R&D intensity and recruiting high-quality engineers. **On-going recruitment:** Continue to invest in 2,500 engineers by 2025 our technology leadership — Number of Phison engineers Phison Peers 50% 3.000 44% 43% 2,500 37% 2,500 40% 35% 2,000 27% 30% 1,450 intensity 1,500 1.112 24% 20% 22% 942 21% 1,000 809 674 10% 500 0 0% 2015 2016 2017 2018 2019 2020E 2021E 2022E 2023E 2024E 2025E 2015 2016 2019 2020E 2017 2018

*RD intensity is RD expense/IC related sales. ** Peers include SIMO, Marvell, MediaTek, Realtek, Novatek and Silergy.

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*Source: PCIe SIG

Our 5-year Vision: To Become the Largest SSD Controller IC Supplier in the World

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2019 - 2024

Leading Edge Technology

Our leading technology will drive growth and we will continue to gain market share

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Before **2018**

The Fast Follower

In the past our R&D investment was mainly for mainstream products



Confidential

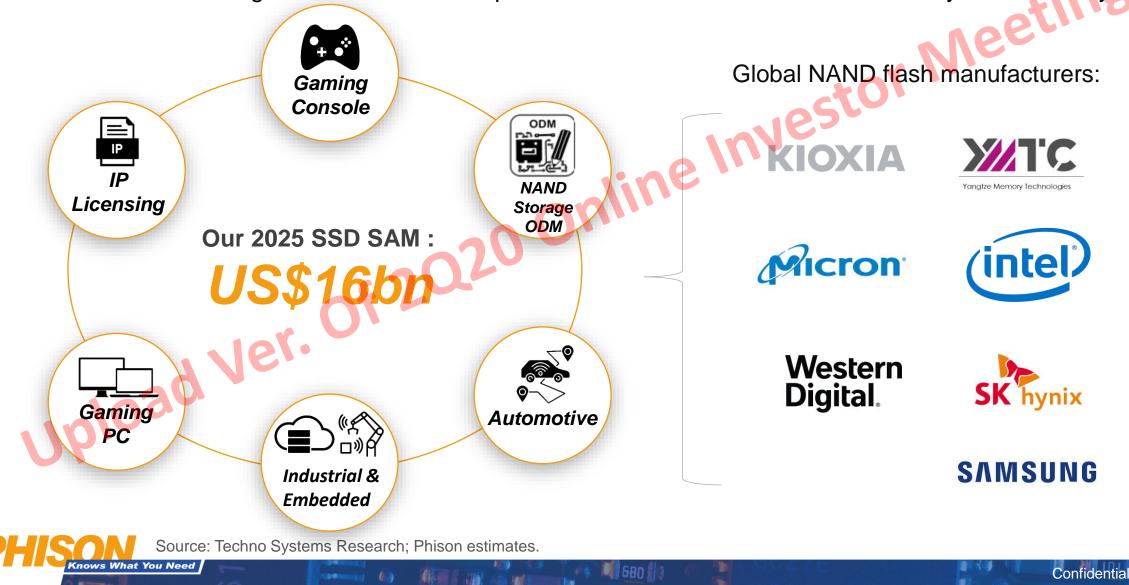
2025 and beyond

To become the largest SSD Controller IC Supplier

Our technology leadership will increase NAND flash makers outsourcing orders

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As we advance our controller IC competitiveness, we will attract NAND flash makers to outsource more orders. We aim to become the largest SSD controller IC provider in the world with US\$16bn SAM by 2025 and beyond.



Enhanced Value for Shareholders

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Leading Edge Technology

- Maintain industry leading R&D intensity
- Leading Controller IC roadmap
- Increasing SAM from US\$6.7bn to US\$8.2bn

To become the largest SSD Controller IC Supplier in the World

- Enhancing IC competitiveness
- Increasing LT SAM from US\$8.2bn to US\$16bn

Market Share Gain

SSD IC shipment share target: 25-30%
Module Bits to outgrow the industry

Sustainable Margin Expansion

• We aim to achieve $25\% \pm 5\%$ LT sustainable GPM

Increase Total Shareholder Return

- 5-year ROE target to reach 20-25%
- At least 50% payout ratio

