RDC Semiconductor Co., Ltd.

2024.4.25

RDC®

Safe Harbor Notice

- This presentation contains forward-looking statements and is subject to risks and uncertainties. Actual results may differ materially from those contained in the forward-looking statements.
- The information provided in this presentation reflects the company's current views about the future; correctness, completeness, or reliability of said views are not explicitly or implicitly expressed or warranted.
- The Company is not responsible for updating or amending changes or adjustments made to the contents of this presentation, if such changes or adjustments should occur in the future.

RDC®

Contents

RDC®

About RDC

- Founded : August 1997
- Capital : ~ NTD $ 698 Million
- IPO : March 2nd , 2005 (OTC: 3228)
- Industry : Semiconductor IC Design

- Over 20 years of developing in-house x86-compatible CPU.
- Over 10 years of long term x86 CPU compatible product delivery commitment for the industrial customers.
- Over millions of processors and controllers have been sold worldwide each year.

RDC®

x86 CPU (except RDC)

- Intel
- AMD
- Via {Cyrix、IDT}<＝>Shanghai Zhaoxin

  (＊Centaur has been sold to Intel)
- Hygon: AMD authorized USD293 million

  (Has been sanctioned by the U.S.)

RDC

CPU Applications

CPU	Client	Interface	Data Center
• x86+Windows • ARM+IOS/Android • MIPS • RISC-V	• PC/NB +peripherals ★AI PC/NB • Mobile +peripherals ★AI Mobile	• Base station +peripherals ★PCIE Switch	• Server- ◆Data Center ◆Edge Server ◆AI Server

RDC

Comparison of x86 Companies

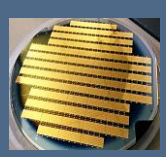
Company Name	Annual Revenue Over The Years (USD)	GM% Over The Years	Annual Revenue 2023 (USD)	2023 GM%	Market Capitalization (USD)
Intel	70-80B	~60%	50.5B	~40%	145.8B
AMD	10-20B	~40%	22.7B	~46%	246.0B
Hygon			800M-1B	~59.67%	23.4B
RDC				~60%	600M
Total	~100B		~70-80B		

PS: Mainland China contributes nearly 30-40% of Intel and AMD's total revenue in x86 CPU.

RDC

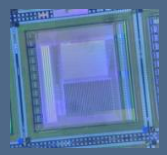
RDC x86-64 4-core SoC Status

- x86-64bits SoC
  - 28nm/22nm, PCIe Gen3.0, DDR4, …



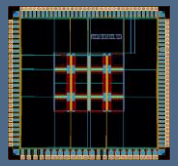
1997

Established



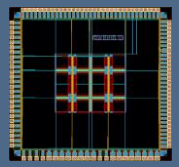
2021

Multi-Core 2/4/8/16/32
32-bits
1.5GHz



2024

Multi-Core(4)
64-bits
2.0GHz



2025

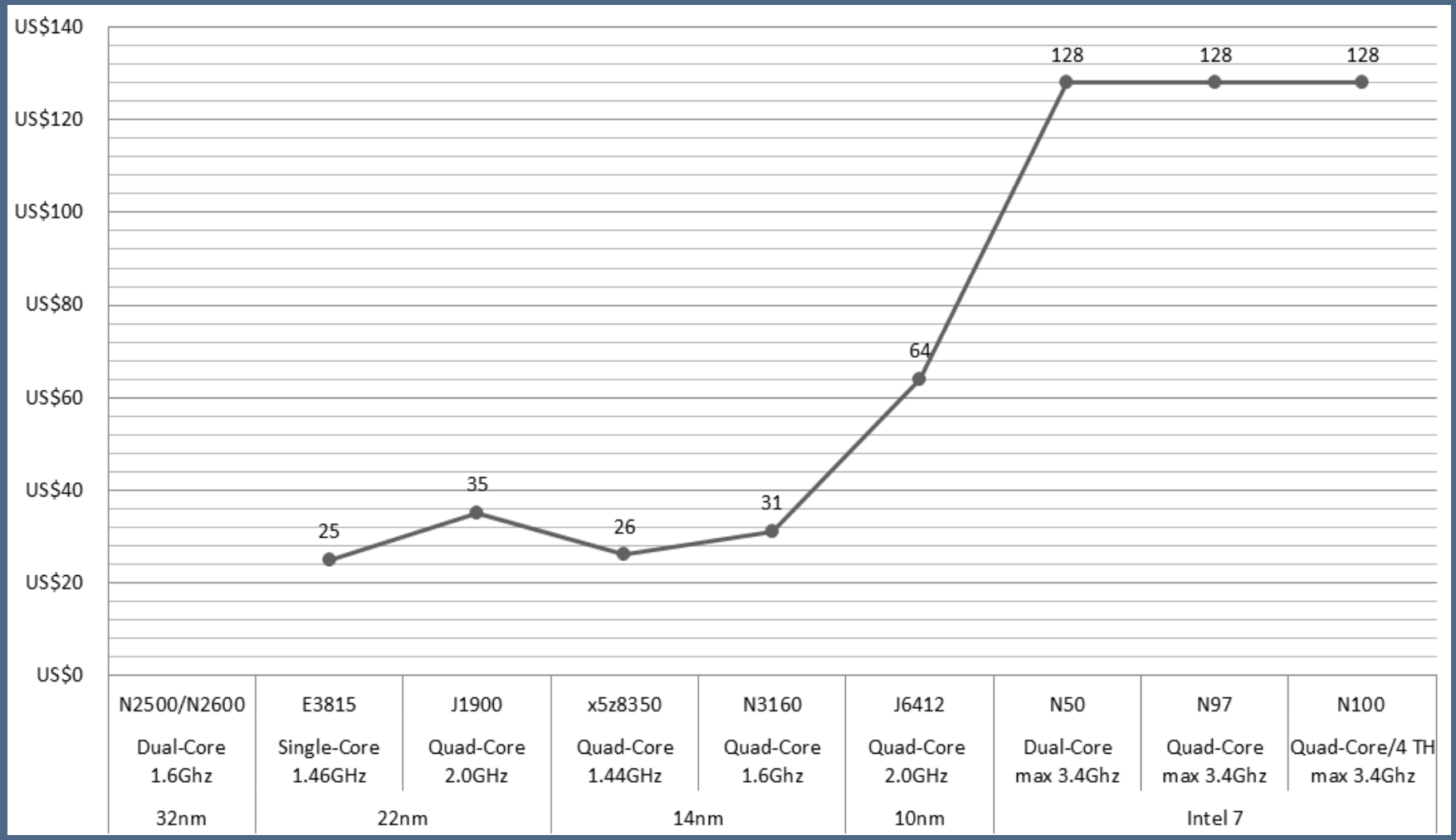
Multi-Core (16)
64-bits
3.0GHz

2026

Multi-Core (128)
64-bits
3.0GHz

RDC

Industrial Control Customers' Status Quo – Process/Price table



Customer Application Scenarios

- **Servo System: Incremental & Absolute encoders**
- **PLC System:**
  - **PAC (Programmable Automation Controller)**
  - **PLC (Programmable Logic Controller)**
- **CNC System:**
  - **Controllers of woodworking machine/turning machine/milling machine/injection molding machine/grinding machine/laser processing machine etc.**
- **Robot System:**
  - **Movement & Handling/Soldering & Welding/Assembly, Spraying/Processing etc.**

Note: The other PLC & CNC in China, the robot vendors adopt Intel J1900, J6412 & i5 x86 Solution.

RDC®

RDC HPC Solutions

RDC®

Microprocessor Report CPU Core Counts

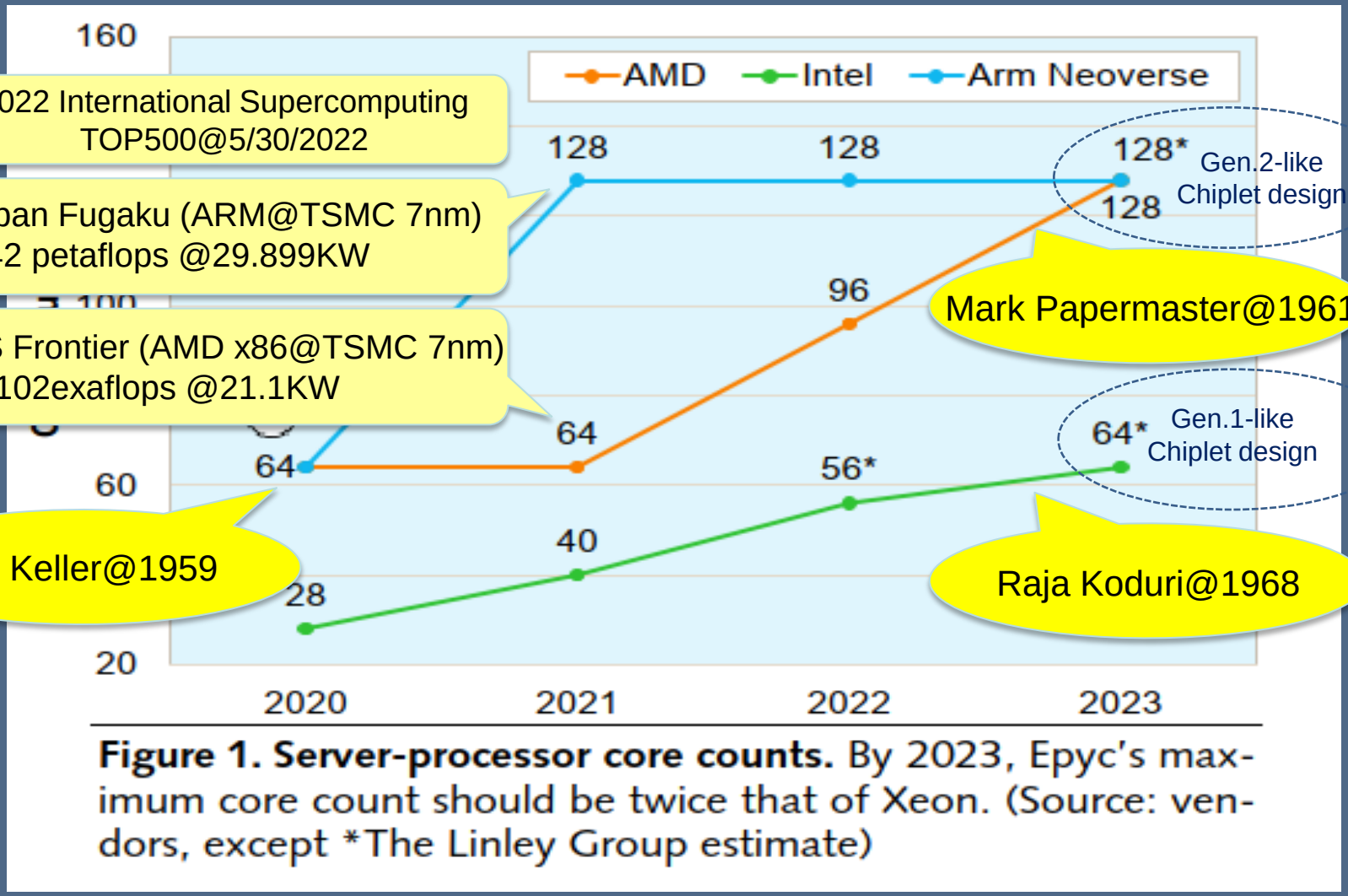


Figure 1. Server-processor core counts. By 2023, Epyc's maximum core count should be twice that of Xeon. (Source: vendors, except *The Linley Group estimate)

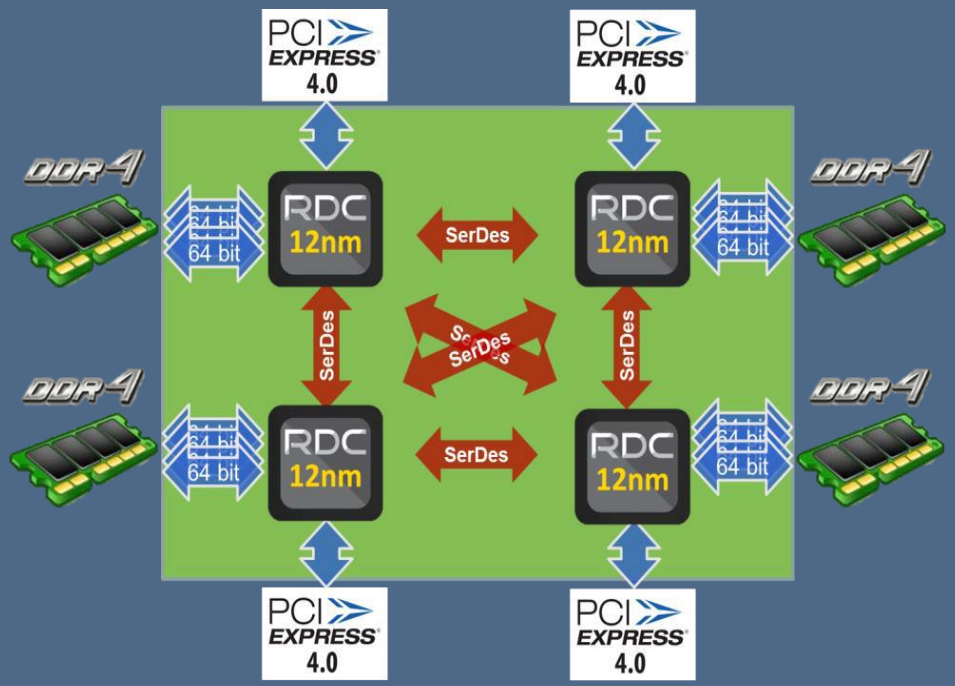
RDC

Gen.1 vs Gen.2 Chiplet's Architecture

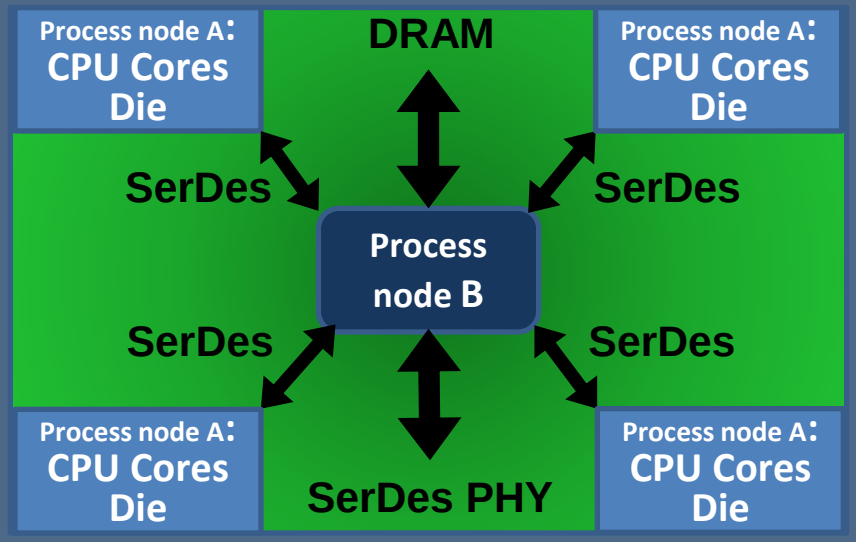
Intel, Apple, NVIDIA
still in Gen.1

AMD's move-on

RDC's Gen.1 Chiplet design



RDC's Gen.2 Chiplet design



upgrade

RDC

RDC HPC Solutions

- **Advanced Process Node**
  - Single Die SoC
  - 2.5D chiplet SoC
- **Matured Process Node**
  - Chiplet SoC
  - Dynamic Domino Circuit for High Speed Operation

RDC®

RDC HPC Solutions

RDC Dynamic Circuit

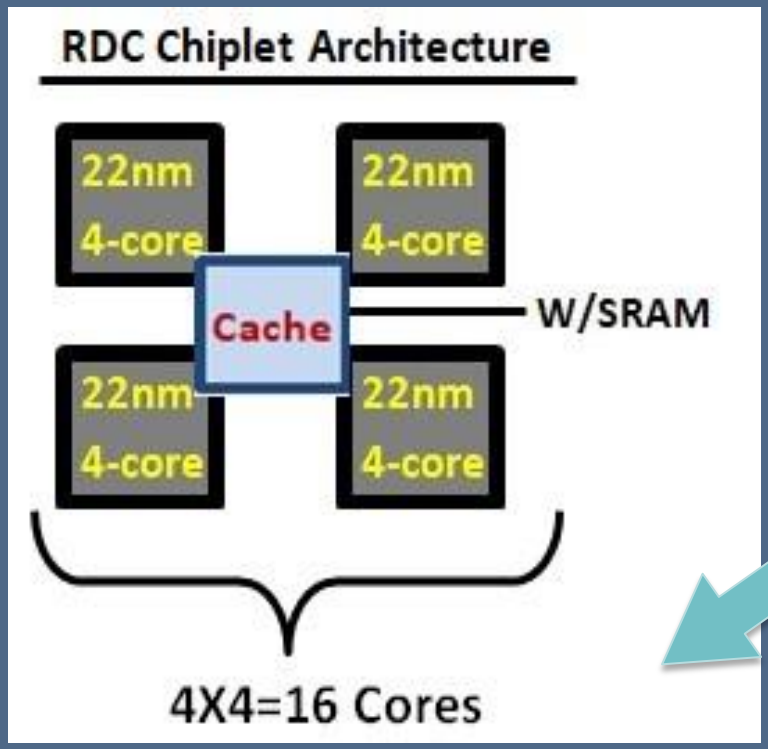
	28nm	22nm	16/14/12nm	7/6nm
Performance	1	1.3	1.5	1.7-1.8
	Dynamic circuit techniques adopted			
	1.4-fold increase		x1	x1
	1.4	1.8	1.5	1.7-1.8

Note 1: RDC obtained two Dynamic Circuit related US invention patents on 21-Sep.-2021 and 12-Oct.-2021.

Note 2: Data listed are RDC internal evaluation data and only used to assist in explaining the contents of the form.

RDC®

RDC Chiplet Architecture



VS

6nm w/16 Cores

- **Pros:** Performance Similarity
- **Cons:**
  Increased power consumption
  on
  RDC Chiplet Architecture

Note: Data listed are RDC internal evaluation data and only used to assist in explaining the contents of the form.

RDC

RDC x86 64-bit boot windows

RDC

Technical Design & Product Overview of PCIe Switch

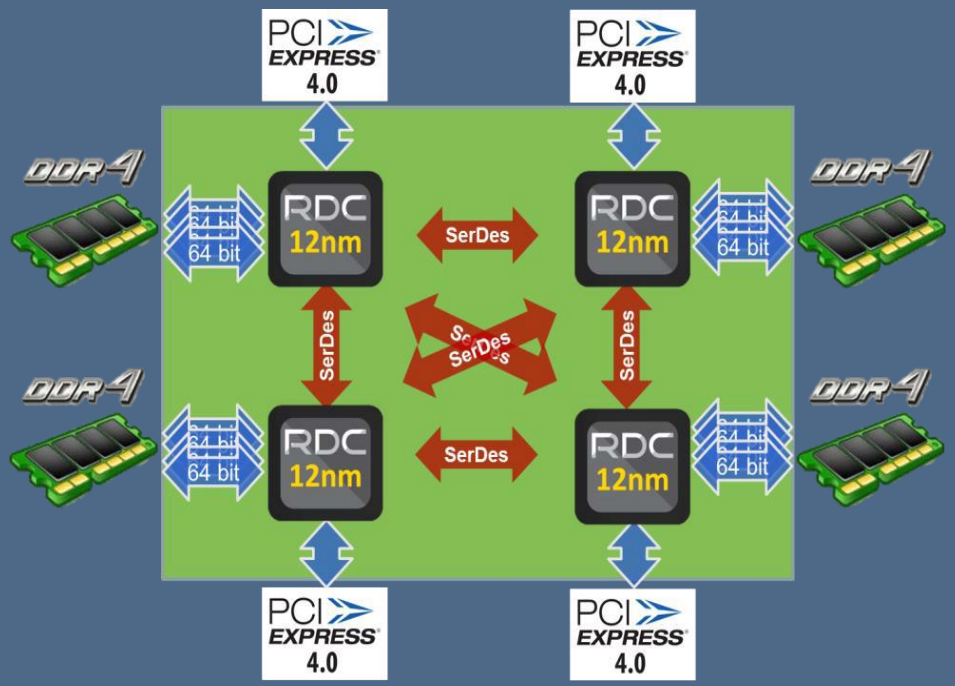
RDC®

PCIe Switch comes from Gen.2 Chiplet's Architecture

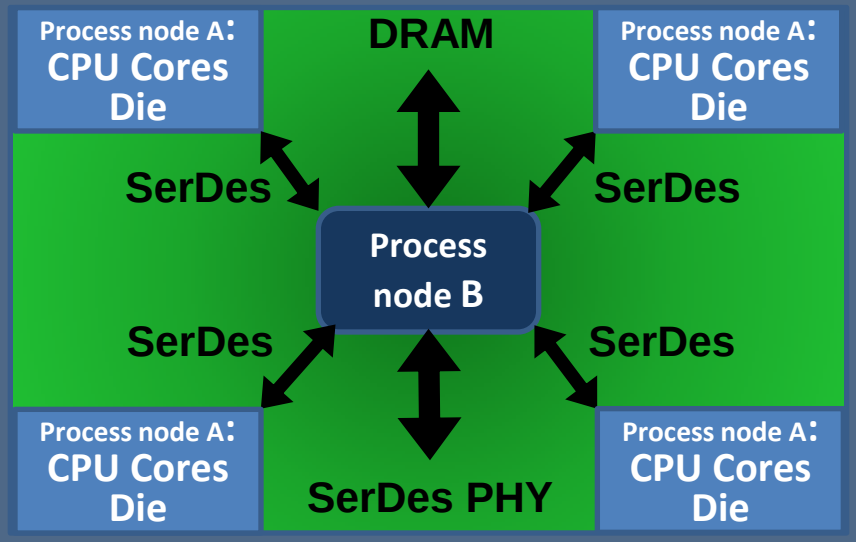
Intel, Apple, NVIDIA
Still in Gen.1

AMD's move-on

RDC's Gen.1 Chiplet design



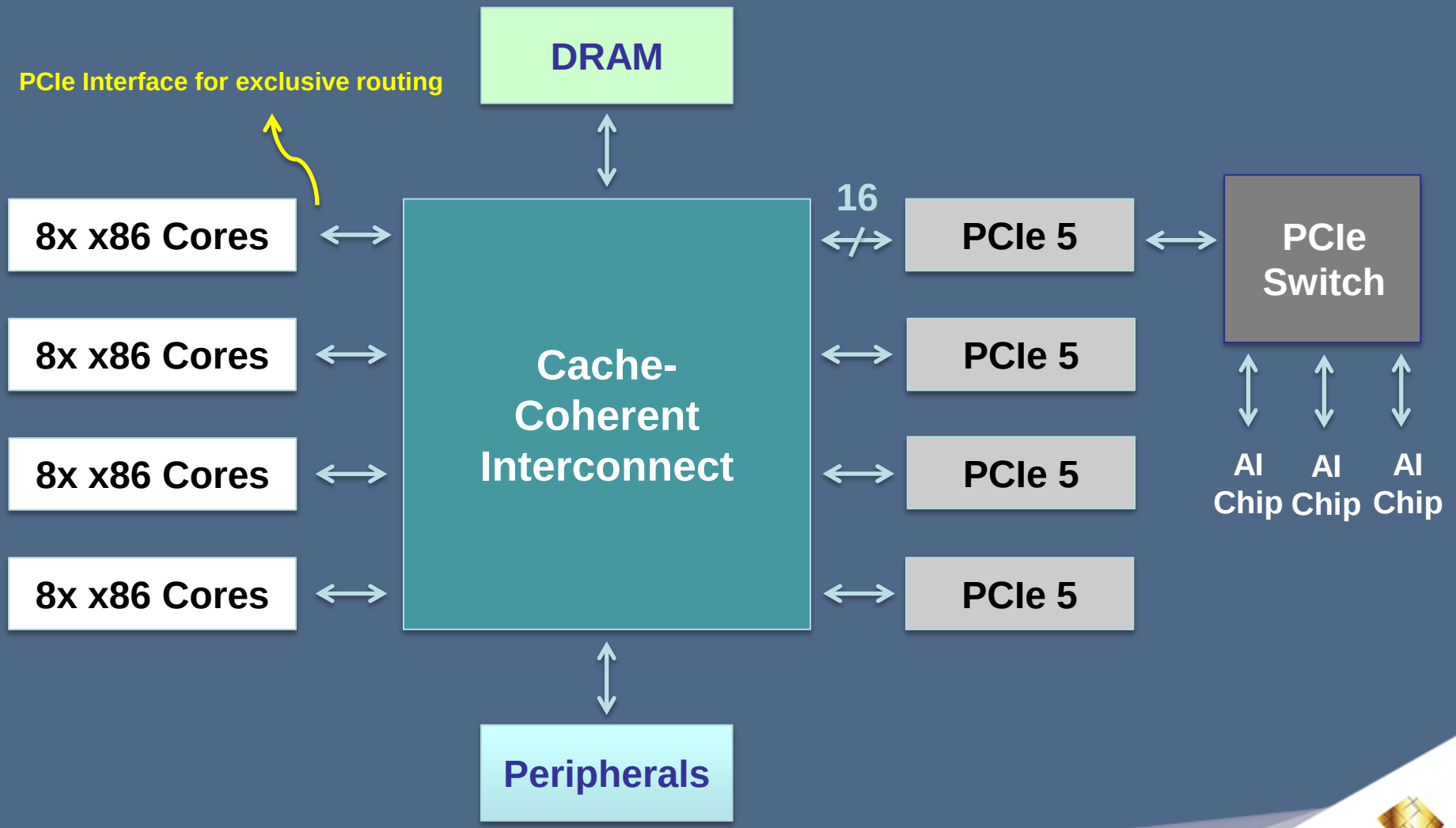
RDC's Gen.2 Chiplet design



upgrade

RDC

PCIe Switch comes from Gen.2 Chiplet's Architecture (Continued)



RDC

The Core Technologies of PCIe Switch

- Broadcast Architecture
- Dynamic Phase Alignment Technique
- Dynamic Circuit Technique

Different architecture design from the traditional Networking switch companies

RDC

The Product Overview of PCIe Switch

- By adopting 12nm PCIe Gen5 Switch benchmarks against Broadcom's 5nm process
- By adopting 6nm to achieve 10T exclusive or PCIe Gen6 Switch to offer global AI demand

Income Statement

Unit: NT$ thousands as of 2023(except EPS)

	Q1 2023	Q2 2023	Q3 2023	The Annual 2023	2024Q1 Unaudited*
Net Sales	76,582	77,141	75,348	301,777	109,659K
Gross Profit	51,332	48,302	49,927	193,361	-
Operating Expense	74,433	72,966	79,818	315,445	-
Operating Income (loss)	(23,101)	(24,664)	(29,891)	(122,084)	-
Pre-Tax Income (Net loss)	(23,450)	(21,963)	(25,664)	(118,796)	7.7M
Net Income(loss)	(24,682)	(22,971)	(25,664)	(121,036)	6.7M
EPS	(0.36)	(0.34)	(0.37)	(1.73)	0.1

* The above financial information from January to March of 2024 prepared by the company in accordance with IFRS. The notice on 23 February, 22 March and 24 April from the TPEx have not been reviewed(audited) by CPAs and are for investors' reference only.

RDC®

Balance Sheet

Unit: NT$ thousands

	2023/3/31	2023/6/30	2023/9/30	2023/12/31
Total Asset	779,934	771,999	749,144	700,714
Cash & Equivalents	93,909	76,441	74,387	67,478
Inventories	167,839	162,060	161,893	149,493
Property, plant and equipment	187,640	178,175	186,147	176,644
Intangible Assets	221,806	203,656	185,835	182,732
Total Liabilities	83,779	105,594	107,494	111,593
Total Equity	696,155	666,405	641,650	589,121

RDC

Competitive Advantage In Application Market (Ⅰ)

- **Embedded application differentiates from Intel/AMD with x86 compatibility and customized design service.**

- **- Intel/AMD focus on high performance and high power consumption.**
  - Reduced/No supplies of low-mid range CPU in the future, which can be fulfilled by RDC.

RDC®

Competitive advantage in application market (Ⅱ)

- **x86 HPC Market**
  - **TSMC HPC revenue surpassed mobile phones.**
  - **TSMC HPC current clients: (US-based mainly) Intel, AMD & NVIDIA**
  - **RDC 2nd generation chiplet architecture fulfills EU, China & Southeast Asia's non-advanced manufacturing requirements of x86 self-developed HPC chips.**

RDC

Future Opportunity

1. 64-bit 4 cores: Industrial Automation/IPC/PC,NB
2. 64-bit 16 cores: Industrial Automation/IPC/PC,NB,AIPC
3. 64-bit 128 cores: edge server/data center/AI server
4. PCIe Switch
5. 5G base station
6. x86 SoC ASIC

Summary

Q & A

Thank You!