

Semiconductors

ABC News: AI, Bandwidth and Compute in the Last Week

Summary

We share salient articles in the last week specific to AI, Bandwidth, and Compute that are important and/or merely interesting as it relates to key secular themes.

News started to percolate into the market on Monday that both AMD and Nvidia are working on ARM-based CPUs for the client PC compute segments as soon as 2025. The news is mildly interesting but a sign that there is a market for ARM's efficient CPUs (obviously Apple has proven this), and are likely being encouraged by Microsoft. We expect that as part of AMD's chiplet approach that the ARM-based CPUs will sport chiplet scale in the sense that these parts will and/or can be used in server and embedded market segments as will be the case for AMD's GPUs, FPGAs, and x86 road maps.

It should be interesting to see if AMD uses ARM's architectural license (build a chip from scratch), or uses ARM's IP offering like Neoverse. Nvidia we see leveraging their Grace-Hopper server/accelerator portfolio to move into the lower echelons of compute for a tougher move for the company that is new to the CPU space.

Intel likely is behind the eight-ball on ARM CPUs just on the notion that the company has been trying to right the x86 CPU roadmap amidst cost-cutting efforts.

High Performance Compute/Deep Learning/AI

[Supermicro Unveils New GPU Systems with NVIDIA GH200 Grace Hopper Architecture for Advanced AI Infrastructure](#)

Graphics/AR/VR/Consumer CPUs

[Nvidia and AMD to Develop Arm CPUs for Client PCs: Report](#)

[AMD Reportedly Receives Orders For Next-gen Instinct MI300X AI Accelerators From Oracle](#)

[NVIDIA & AMD Planning To Launch Arm-Based CPUs For PCs, To Tackle Intel & Apple By 2025](#)

[AMD Readies Lower-Clocked Ryzen 9 7940HX & Ryzen 7 7840HX Dragon Range Laptop CPUs](#)

[AMD China to Experience Massive Downsizing, Radeon Technology Group Affected The Most](#)

[AMD Starts to Roll Out RDNA 3.5 Refresh “GFX1150” GPU Support In Linux 6.7](#)

[AMD Ryzen Threadripper 7995WX CPU Offers More FP32 TFLOPs Than Xbox Series X & PS5, On Par With RTX 3060 GPU](#)

[Valve Reversing VAC Bans For Counter Strike 2 Players Who Used AMD Anti-Lag+, Also Adds Driver Check](#)

[AMD Ryzen Threadripper PRO 7995WX 96 Core CPU Shatters Cinebench Performance Benchmarks, Almost 150K Score](#)

[NVIDIA & AMD Power The World’s Most Powerful AI Workstations With Threadripper 7000 CPUs & RTX GPUs](#)

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| Related Companies: | Share Price: |
|--------------------|--------------|
| AIP | \$5.53 |
| AMD | \$101.67 |
| AVGO | \$881.11 |
| INTC | \$34.59 |
| LSCC | \$72.81 |
| MCHP | \$76.03 |
| MPWR | \$418.00 |
| MRVL | \$49.49 |
| MU | \$68.07 |
| NVDA | \$436.63 |
| TXN | \$146.92 |

AMD Radeon RX 7900M GPU Debuts In Alienware m18 Laptop: Ryzen 7045HX & RDNA 3 For Insane Mobility Performance

AMD Ryzen Threadripper 7000 CPUs Launched: The World's Fastest Workstation Chips, Up To 96 Cores In PRO & DIY Flavors

Gigabyte TRX50 AERO D SP6 Motherboard For AMD Ryzen Threadripper 7000 CPUs Unleashed

Chinese CPU Maker, Phytium Unveils Next-Gen Architecture, 3 GHz Chip on Par With 4 GHz AMD Zen 3

Intel 14th Gen CPUs See Big Gaming Performance Boost With APO Feature, 32% Uplift In Rainbow Six Siege

Delidded Intel Core i9-14900K CPU Runs 13C Cooler, IHS & TIM Design Same As 13th Gen

Intel Core i9-14900K CPU Runs Counter Strike 2 At Over 1300 FPS With A 8 GHz Overclock

Mihira AI to License Intel's "Abandoned" Project Endgame, Led By Mastermind Raja Koduri

Intel 14th Gen Core i5-14600 14 Core & Core i3-14100 4-Core Non-K CPU Benchmarks Leak Out

Intel Core Ultra 9 185H "Meteor Lake" CPU Boasts 5.1 GHz Clocks In First Geekbench Entry

NVIDIA GeForce RTX 4060 Ti 16 GB GPU Now Comes In Single-Slot & Blower-Fan Design

NVIDIA GeForce RTX 4080 SUPER GPU Rumored To Get 20 GB GDDR6X Memory, 25% More Than RTX 4080 At Same Price

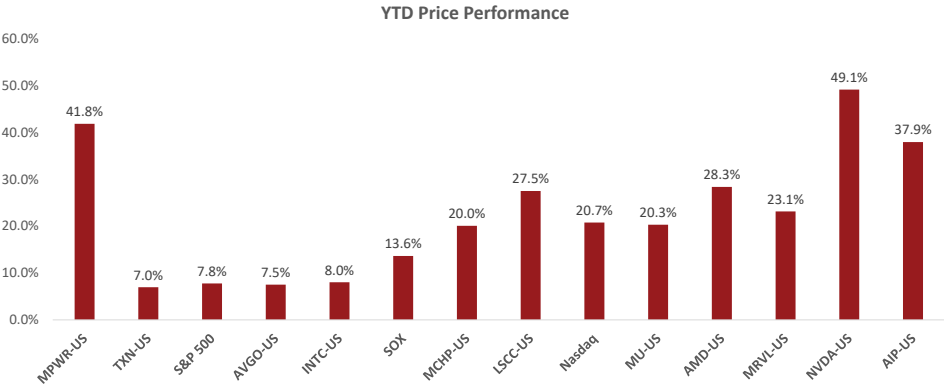
NVIDIA CEO Reacts To US Policies, China Ban Will Have An Impact But Will Continue To Work With Chinese Customers

NVIDIA GeForce RTX 4070 SUPER Rumored To Get AD103 GPU & 16 GB VRAM, Non-GDDR6X RTX 4070 Also In The Works

NVIDIA Rumored To Launch GeForce RTX 40 SUPER GPUs: RTX 4080 SUPER, 4070 Ti SUPER & 4070 SUPER

Autonomous Driving/AI

Foxconn and Nvidia are building 'AI factories' to accelerate self-driving cars



Semiconductor Industry Comp Sheet

| Company Name | Ticker | Rating | 10/25/2023 Price | Price Target | Upside/ Downside | Market Cap (\$M) | Enterprise Value (\$M) | Valuation | | | | | | | | | | | |
|-----------------------------------|---------|--------|---------------------|-----------------|---------------------|---------------------|---------------------------|-----------|-------|-------|--------|-------|-------|--------|--------|--------|-----------|-------|-------|
| | | | | | | | | EV/Sales | | | P/E | | | EV/FCF | | | EV/EBITDA | | |
| | | | | | | | | CY23E | CY24E | CY25E | CY23E | CY24E | CY25E | CY23E | CY24E | CY25E | CY23E | CY24E | CY25E |
| Analog/MCUs | | | | | | | | | | | | | | | | | | | |
| Microchip Technology Incorporated | MCHP-US | Buy | \$76.03 | \$110.00 | 45% | 41,386 | 47,714 | 5.5x | 5.5x | 5.2x | 12.5x | 12.4x | 11.8x | 14.1x | 14.9x | 14.0x | 11.4x | 11.4x | 10.6x |
| Monolithic Power Systems, Inc. | MPWR-US | Buy | \$418.00 | \$580.00 | 39% | 19,971 | 19,446 | 10.7x | 9.3x | 8.2x | 35.7x | 31.8x | 26.0x | 38.1x | 37.6x | 30.1x | 28.9x | 24.8x | 21.4x |
| Texas Instruments Incorporated | TXN-US | Buy | \$146.92 | \$190.00 | 29% | 133,398 | 136,853 | 7.6x | 7.1x | 6.5x | 20.1x | 19.3x | 17.5x | 57.0x | 28.6x | 24.1x | 15.2x | 13.8x | 12.0x |
| Communications/DC | | | | | | | | | | | | | | | | | | | |
| Broadcom Inc. | AVGO-US | Buy | \$881.11 | \$1,000.00 | 13% | 363,665 | 403,520 | 11.1x | 10.2x | 9.5x | 20.6x | 18.7x | 16.8x | 22.3x | 19.8x | 18.4x | 17.3x | 16.0x | NM |
| Lattice Semiconductor Corporation | LSCC-US | Buy | \$72.81 | \$110.00 | 51% | 10,036 | 10,133 | 13.3x | 11.8x | 11.4x | 34.9x | 29.6x | 26.8x | 38.7x | 31.1x | 31.9x | 34.0x | 27.3x | 30.0x |
| Computing | | | | | | | | | | | | | | | | | | | |
| Advanced Micro Devices, Inc. | AMD-US | Buy | \$101.67 | \$200.00 | 97% | 164,265 | 161,992 | 7.1x | 5.9x | 5.2x | 36.9x | 24.8x | 19.7x | 42.8x | 30.9x | 25.0x | 24.7x | 21.8x | 17.0x |
| Intel Corporation | INTC-US | Sell | \$34.59 | \$17.00 | -51% | 144,863 | 173,383 | 3.3x | 2.9x | 2.7x | 53.8x | 19.9x | 13.9x | -12.6x | -61.6x | 122.7x | 15.7x | 11.0x | 8.5x |
| NVIDIA Corporation | NVDA-US | Buy | \$436.63 | \$1,100.00 | 152% | 1,078,476 | 1,086,069 | 20.7x | 13.7x | 11.3x | 43.2x | 26.4x | 21.7x | 50.0x | 28.7x | 22.8x | 38.3x | 23.8x | 19.6x |
| Super Micro Computer, Inc. | SMCI-US | Buy | \$262.62 | \$375.00 | 43% | 13,894 | 14,549 | 1.3x | 1.2x | 1.1x | 14.1x | 14.9x | NM | 37.8x | 16.9x | NM | 12.3x | 13.1x | NM |
| IP | | | | | | | | | | | | | | | | | | | |
| Arteris, Inc. | AIP-US | Buy | \$5.53 | \$21.00 | 280% | 199 | 145 | 2.6x | 2.1x | 1.5x | NM | NM | 25.1x | -16.1x | -96.5x | NM | -4.8x | -5.7x | NM |
| ARM Holdings PLC ADR | ARM-US | Buy | \$52.37 | \$85.00 | 62% | 53,692 | 51,908 | 18.0x | 14.8x | 12.4x | NM | 41.5x | 33.3x | 87.5x | 51.0x | 32.8x | NM | 33.9x | 27.4x |
| Memory/Storage | | | | | | | | | | | | | | | | | | | |
| Marvell Technology, Inc. | MRVL-US | Buy | \$49.49 | \$100.00 | 102% | 42,700 | 46,870 | 8.4x | 7.3x | 6.3x | 31.3x | 21.9x | 17.2x | 47.9x | 29.3x | 21.6x | 27.7x | 20.3x | 16.2x |
| Micron Technology, Inc. | MU-US | Buy | \$68.07 | \$100.00 | 47% | 74,743 | 78,806 | 3.3x | 2.5x | NM | 107.0x | 10.8x | NM | 128.5x | 20.8x | NM | 8.9x | 5.3x | NM |

Source: Rosenblatt estimates, FactSet

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| Distribution of Ratings/IB Services | | | | |
|-------------------------------------|-------|---------|-----------------------|---------|
| Rating | Count | Percent | IB Serv./Past 12 Mos. | |
| | | | Count | Percent |
| BUY | 83 | 73.45 | 4 | 4.82 |
| NEUTRAL | 25 | 22.12 | 1 | 4.00 |
| SELL | 5 | 4.42 | 0 | 0 |

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