

# FutureHorizons



The Global Semiconductor Industry Analysts

## FH MONDAY

7 June 2021

### Lightmatter Raises More Funding for Photonic AI Chip

Lightmatter, the MIT spinout building AI accelerators with a silicon photonics computing engine, announced a Series B funding round, raising an additional \$80 million. The company's technology is based on proprietary silicon photonics technology which manipulates coherent light inside a chip to perform calculations very quickly while using very little power

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### Fincantieri and Faist in Joint Battery Venture

Fincantieri has announced a joint venture with Faist Electronics dedicated to the production of lithium-ion batteries, considered fundamental in many industrial market segments and a source of competitive advantage for those companies and countries that own this technology.

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### Project44 announces acquisition of ClearMetal

Project44, a leader in real-time visibility of the global supply chain, announced it has acquired ClearMetal, a San-Francisco based leader in international supply chain visibility and predictive analytics for enterprises.

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### TALK TO US



### Gap widens between TSMC and Samsung Electronics

The gap between the world's top two chip companies -- TSMC of Taiwan and Samsung Electronics of South Korea -- has widened over the past 12 months in terms of market cap, according to a Seoul-based corporate tracker.

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### EVENTS

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-November 2021- London UK

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### Arm Upgrades Its Entire PC And Mobile Portfolio

The entire CPU lineup is being refreshed with new Armv9-based products with significant improvements in performance and efficiency. The most important feature that Armv9 adds is the second generation of Scalable Vector Extensions (SVE2) which is an upgrade to Arm's original Neon SIMD extensions.

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## **Lightmatter Raises More Funding for Photonic AI Chip**

Lightmatter, the MIT spinout building AI accelerators with a silicon photonics computing engine, announced a Series B funding round, raising an additional \$80 million. The company's technology is based on proprietary silicon photonics technology which manipulates coherent light inside a chip to perform calculations very quickly while using very little power (see our primer: How Does Optical Compute Work?).

"This Series B will get us through our early access programs with our customers and fund our team growing," Lightmatter CEO Nick Harris said in an interview. "We're building a lot of our go-to-market team... it's about taking the company from being an engineering organization that had to invent all this stuff, to being a company that's focused on delivering it to customers – yield, reliability, margins, and the business side of things.

## **Fincantieri and Faist in Joint Battery Venture**

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According to a statement from Fincantieri, the batteries produced by Power4Future will contribute towards achieving the decarbonization goals underlying the Italian national Recovery and Resilience Plan (RRP), which has set specific goals and priorities to make the Italian ports and transportation in general, more green.

## **Project44 announces acquisition of ClearMetal**

Project44, a leader in real-time visibility of the global supply chain, announced it has acquired ClearMetal, a San Francisco based leader in international supply chain visibility and predictive analytics for enterprises.

ClearMetal's AI allows organisations to optimise their supply chains and provides customers with easy access to trusted, live information about their orders and shipments. This acquisition by project44, enables customers to improve agility, and resiliency across their global and multi-modal supply chains

"Project44 has the broadest and deepest visibility network in the world, across all transportation modes," said Jett McCandless, Founder & CEO, project44. "With the addition of ClearMetal's advanced AI technology and data science team, we're building on a strong foundation and extending capabilities to deliver more accurate, predictable ETAs and visibility into customer orders and inventory in transit."

## **Gap widens between TSMC and Samsung Electronics**

The gap between the world's top two chip companies -- TSMC of Taiwan and Samsung Electronics of South Korea -- has widened over the past 12 months in terms of market cap, according to a Seoul-based corporate tracker.

CEO Score said on Sunday that the market capitalization of TSMC and Samsung Electronics had a difference of about \$10 billion a year ago, but the gap has widened to \$117 billion.

As of May 27, the value of TSMC was \$543.3 billion, a 96.3 percent surge from \$276.8 billion on-year, while that of Samsung was \$425.4 billion, a 59.5 percent increase in the same period.

TSMC shares are traded on the Taiwan Exchange and the New York Stock Exchange, while Samsung stocks are quoted solely on the Korea Exchange. The CEO Score's data did not provide the performances of the respective stock market's benchmark indexes.

## **Arm Upgrades Its Entire PC And Mobile Portfolio**

Just over a month after refreshing its Neoverse infrastructure line of CPU cores, Arm released a flurry of new products aimed at PC and mobile applications. In its largest IP product release ever, Arm released complete families of CPU, GPU, DSU, and interconnect IP as it continues to sync up releases across product lines to what it calls "Total Compute solutions." In fact, the only major computing core family that did not receive an update with this release is the newest family of products, the Ethos NPUs for machine learning acceleration.

The entire CPU lineup is being refreshed with new Armv9-based products with significant improvements in performance and efficiency. The most important feature that Armv9 adds is the second generation of Scalable Vector Extensions (SVE2) which is an upgrade to Arm's original Neon SIMD extensions. Updates to Neon and the addition of SVE2 can deliver much faster performance on machine learning workloads and other parallel workloads. Arm also rolled up a series of improved math and security features described in later versions of Armv8 instruction set releases. All future Arm Cortex CPUs will implement SVE2.