

Optical computer chip startup Procyon launches Matrix Unit; boosting computing power & starting a new era for mankind

ASHBURN, VIRGINIA, UNITED STATES, February 6, 2023 /EINPresswire.com/ -- Their team of engineers and businesspeople is looking to change computers around the world forever.

After months of anticipation, a new optical computer chip start-up, Procyon, has launched the revolutionary Matrix Unit, a prototype optical matrix-vector multiplier with applications to large neural network inference. The work is a big step towards the optical computing dream, which Bell Labs first proposed in the late 20th century.

Launched by Sathvik Redrouthu and Jagadeepam Maddipatla in 2021, it quickly brought on Pranav Velleleth for market advice and recruited a stellar engineering/business team. The team's vision is to advance humanity to the next level of civilization, which directly correlates with computing power as it has for the last century.

Talking on the occasion, a representative for the company said, "In the 1990s, engineers attempted to create these computers faced a lot of constraints because of which the hype died down, and optical computing received a negative reputation for decades. At Procyon, we took advantage of the recent revolutions in optics and revived the lost dream. Charles Babbage's original Difference Engine in 1822, the ENIAC in World War 2, personal computers in the 1980s, modern AI supercomputers; computers evolved from mechanical parts to electrical circuits, and we're building the next step."

The promising startup has already built up significant traction without deep pockets. The initial R&D funding came out of the team's pocket, but they are currently seeking capital to scale.

The ultra-fast-paced engineering led to the creation of Procyon's Matrix Unit, a prototype optical matrix-vector multiplier with applications to large neural network inference. The Matrix Unit was calculated to have a 220 GHz clock speed with approximately 0.5 mW power usage during testing. Since the prototype is meant for smaller datasets, the Matrix Unit runs at about 52 kFLOPS/watt. Still, this metric is projected to increase significantly when the hardware is scaled to work with industry-grade data. The prototype has an estimated efficiency rating of 411 PIPS/watt. These statistics were enough to fuel Procyon's current endeavor - building tech to integrate the Matrix Unit with consumer electronics. People can check the estimated stats on their website for the rudimentary prototype, named [Tachyon](#).

The company is committed to building, researching, and testing optical chips to power neural networks and related data-intensive applications.

People interested in learning more about the [photonic](#) hardware behind the invention or want to help the team to move forward can reach out to them by visiting their website.

<https://www.procyonphotonics.org/home>.

About the Company

Procyon is a start-up with a passionate core of people building [supercomputer](#) chips that run on light from infrared lasers. They believe that optics is the next step in computers for humanity. Their team members include Sathvik Redrouthu, Jagadeepam Maddipatla, Pranav Velleleth, Pranav Vadde, Rithvik Redrouthu, Rishi Athavale, Jay Khandelwal, Shaurya Jain, Vaibhav Vasudevan, Steven Lu, Ryan Kim, David Cao, and Parthiv Maddipatla.

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