Department of Commerce Announces Letters of Intent With 7 Companies for $874 Million to Accelerate Semiconductor R&D for the Compute Supply Chain

The CHIPS Research and Development Office's incentives will support semiconductor R&D for integrated photonics, compute architectures, advanced packaging, substrates, materials and memory for the compute supply chain.

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WASHINGTON, D.C. – The Department of Commerce today announced the signing of 7 letters of intent to provide $874 million in federal incentives under the CHIPS and Science Act.

These incentives will support innovative domestic technologies to dramatically increase the performance of the world's fastest computers, secure domestic supply chains, and strengthen U.S. leadership in the compute supply chain.

The technologies that will be developed and accelerated by these research and development incentives will enable an infrastructure for advanced computing and AI systems that can progress key advances for multiple industries including materials innovation, industrial optimization, robotics, defense systems, drug discovery, and finance.

"With today's compute supply chain investments, the Trump Administration is accelerating America's innovation engine," said Secretary of Commerce Howard Lutnick. "These strategic investments will enhance our country's domestic capabilities, create high-paying jobs and keep America at the forefront of the semiconductor industry."

The companies listed below have entered into letters of intent with the Department of Commerce, and there will be further diligence and approval by the Department before final awards are made. Under the final awards, these companies will conduct R&D to address critical technologies and advance integrated photonics, compute architectures, advanced packaging, substrates, materials, and memory for next-generation computing and AI systems.

- **GlobalFoundries** will receive up to $300 million to accelerate the domestic research and development of co-packaged optics by two to three years. By integrating photonics directly alongside AI processors, this technology will deliver ultra-fast, energy-efficient computing to reinforce U.S. leadership in AI infrastructure.

- **Kepler** will receive up to $245 million for R&D to develop in the U.S. a new class of high-performance AI memory technology enabled by innovative 3D and ferroelectric technologies.

- **Multibeam Corporation** will receive up to $140 million to develop advanced packaging technology to assemble and stack multiple chips and connect them with thousands of wires, which will enable more advanced systems necessary for AI and other advanced computing applications.

- **Extropic** will receive up to $75 million to develop thermodynamic sampling units (TSUs) which use natural thermal fluctuations to probabilistically solve complex problems spanning simulation, optimization, and AI, at a fraction of the energy consumed by conventional computing approaches.

- **Thintronics** will receive up to $50 million to develop ultra-low-loss inter-layer dielectrics required for next-generation semiconductor interconnects and advanced packaging in high-performance compute, AI, and networking infrastructure.

- **OBSIDIA Semiconductors** will receive up to $34 million for R&D to deliver non-invasive counterfeit and malicious component identification systems to ensure provenance and traceability in secure supply chains for AI and advanced electronics.

- **Aeluma** will receive up to $30 million to develop large diameter, indium-phosphide-free substrate technology used to fabricate photodetectors and lasers for AI photonic interconnects.

“These CHIPS R&D incentives will support breakthroughs in compute and communication infrastructures to power next-generation AI capabilities,” said Bill Frauenhofer, the Executive Director for Semiconductor Innovation and Investment at the Department of Commerce. “Accelerating R&D for domestic photonics capabilities, novel memory architectures, advanced packaging, substrates, and other technologies will provide American industries the extreme bandwidth and energy efficiency to scale complex AI workloads securely and rapidly.”

The Department will receive a minority, non-controlling equity stake in each company as a condition for receiving the funds to enhance the return for the U.S. taxpayer.

The CHIPS Research and Development Office continues to solicit proposals from eligible applicants for research, prototyping and commercial solutions that advance microelectronics technology in the U.S. Eligible applicants should apply under announcement 2025-NIST-CHIPS-CRDO-01 at www.grants.gov.