



Get the facts about Intel Foundry, the world's first systems foundry for the AI era

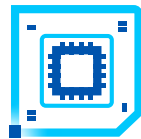
Semiconductors touch nearly every aspect of our lives from the phones in our pockets to the cars we drive, and AI processing capabilities have become expected across most use cases. To meet the demands for more production, improved power efficiency, and increased performance, the industry is shifting to multi-die, chiplet-based architectures.

Intel Foundry is one of the few manufacturers that can meet today's demands by producing chiplet systems in house at scale. Now, we've made that capability available to the entire industry through our systems foundry.

The systems foundry combines Intel process innovation with the Intel Foundry Advanced System Assembly & Test (Intel Foundry ASAT) capabilities required for high-yield production of heterogeneous, multi-die, systems-of-chips designs. With Intel Foundry, fabless manufacturers have a one-stop option for general-purpose processors with AI subsystems, AI accelerators, and everything in between.

Global semiconductor demand exceeds supply

The demand for essential semiconductors is growing rapidly, and demand for AI accelerators is growing even faster.



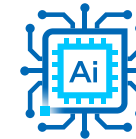
1.2 trillion chips in 2023

Global manufacturers shipped 1.218 trillion semiconductor units in 2023.¹



10.87% more in 2024

Forecasters predict global semiconductor revenue will grow 10.87% in 2024.¹



\$67.2B in AI

The AI chips market will hit \$67.2 billion in 2024, up from \$53.5 billion in 2023.²

Feeding AI is revolutionizing semiconductor manufacturing

Generative AI is voracious. The demand for AI processors — and the supercomputing infrastructure that supports them — has the world's foundries running non-stop. Accelerating processor performance, improving power efficiency, and increasing manufacturing capacity to match the scaling requirements of AI workloads will take next-level innovation.

A systems foundry for the AI era

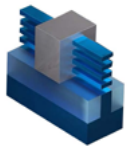
Disaggregated, chiplet designs are among the most-viable solutions for creating high-density, high-performance AI accelerators. Intel Foundry offers full-stack design and fab services plus global packaging and test facilities that can mass manufacture industrial quantities of complex, systems-of-chips processors at high yields and competitive pricing.

Leading-edge process technologies



18 Angstroms and shrinking

Intel 18A process node takes density below 2nm with extreme UV lithography.



3D transistors

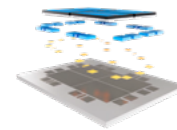
RibbonFET gate-all-around (GAA) lithography stacks transistors vertically for increased density and improved signal integrity.



3D backside power

PowerVia backside power delivery separates power from signal processing to deliver increased frequency and power efficiency.

Proven packaging and test capabilities



>100 2.5D designs

Intel Foundry has more than 100 2.5D designs ranging from five-die packages to more than 45 dies in a single package.



High-speed interconnects

Embedded Multi-die Interconnect Bridge (EMIB) replaces through silicon vias (TSVs) with a cost-effective, simple-to-design, embedded communication layer.



Advanced 3D packaging

Foveros Direct 3D delivers sub-10-micron bump pitches for increased interconnect density and higher-performance, stacked-chiplet designs.



97% post-assembly test yield³

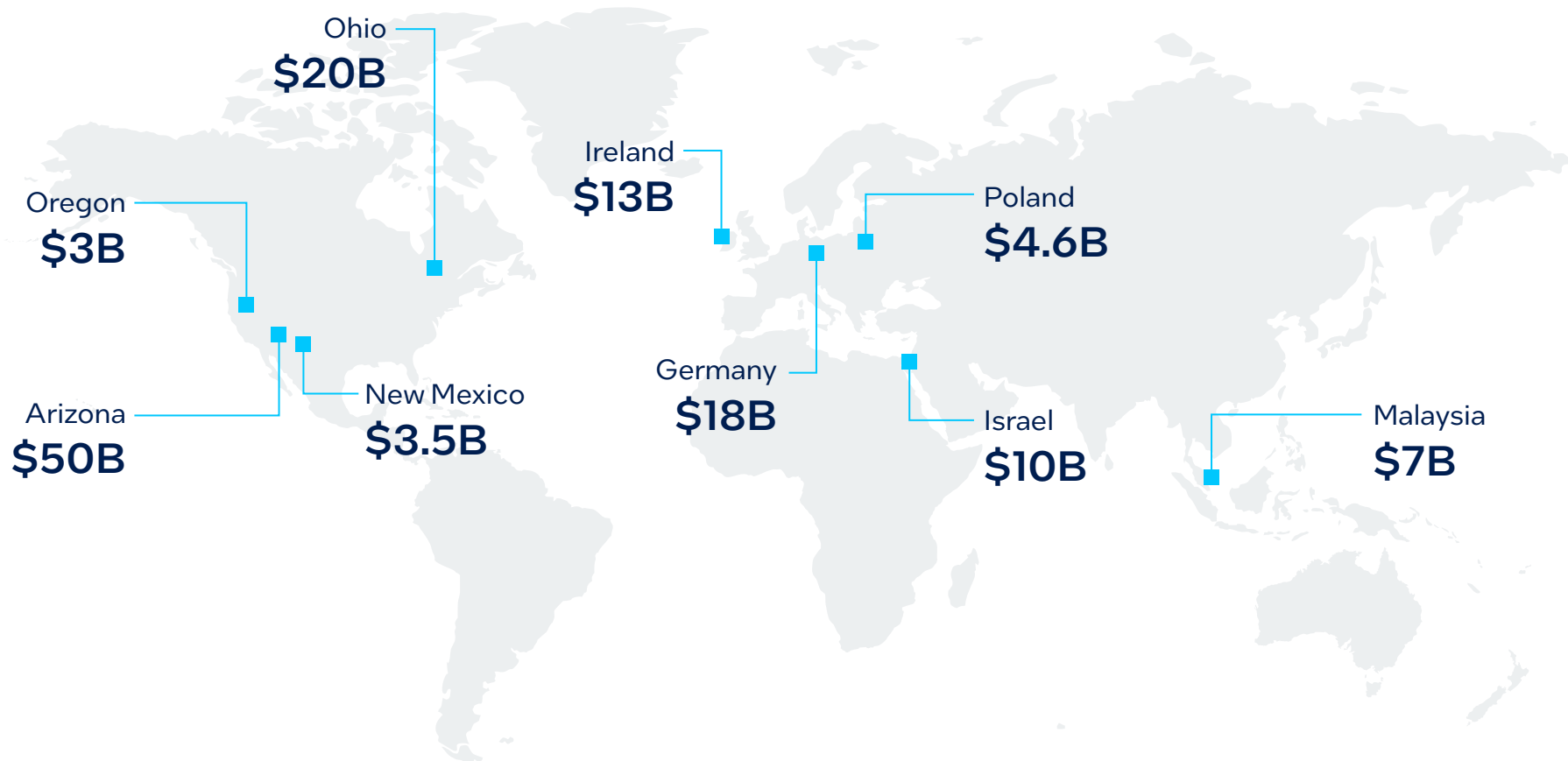
Our advanced test and sort processes send 99% known good dies to assembly³, which produces significantly higher yields.

Rebalancing supply and demand with an integrated, global model

Intel Foundry builds on Intel's proven, global manufacturing capacity and integrated supply chain.

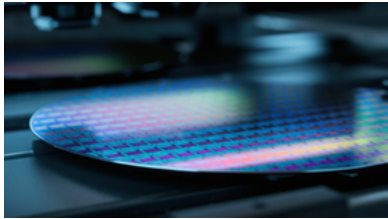
We're upgrading and expanding existing factories, and standing up new factories in the United States, Germany, and Poland.

Intel is prepared to invest up to \$200B in capacity within this decade⁴

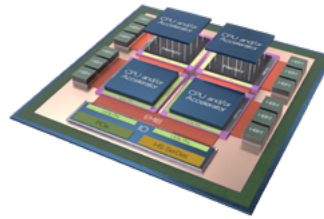


Open ecosystems fuel innovation

Innovation thrives on flexibility, diverse approaches, and collaboration. By manufacturing for multiple architectures (ARM, RISC-V, x86, and custom ASICs), supporting major IPs, and partnering with the ecosystem, Intel Foundry helps advance innovation while clearing choke points throughout the industry.



Multi-architecture fabrication



Chiplet systems with any ecosystem core



30+ ecosystem partners

“Our combination of packaging and process technology, US-based global capacity, and world-class IP makes us a foundry like no other.”

— Pat Gelsinger



More sustainable capacity, innovation, and growth

Everything, even silica, is finite. Engineering higher-performance, more power-efficient semiconductors helps technology do more with less energy, but manufacturing those chips takes water, electricity, and chemicals—all of which we must manage and conserve.



110% water restoration⁵

Through recycling and ecosystem restoration, Intel generates more water than it uses.



99% renewable electricity⁶

Intel has more than 50,000 kW of alternative and renewable electricity installations across 22 Intel campuses.



63% upcycled manufacturing waste⁷

From 2022 to 2023 Intel reduced manufacturing waste 28% and upcycled 76,000 tons of waste.

Let's talk

Every foundry engagement is a major commitment filled with problems to solve and details to wrangle. We'd appreciate hearing about your needs and discussing how Intel Foundry might be of service.

intel.com/foundry →

Sources:

1. Statista, [Market Insights, Semiconductors Worldwide](#), accessed February 2024
2. Statista, [AI chips, statistics & facts](#), accessed February 2024
3. Intel Analysis, 2021
4. Scale of some investments contingent on U.S. and EU support. These statements are based on current expectations and involve many risks and uncertainties that could cause actual results to differ materially from those expressed or implied in such statements. For more information on the factors that could cause actual results to differ materially, see our most recent earnings release and SEC filings at www.intc.com.

5. [Intel's 2023-24 Corporate Responsibility Report \(CSR\)](#) Details regarding Intel's water stewardship commitments and progress can be found beginning on page 81.
6. [Intel's 2023-24 Corporate Responsibility Report \(CSR\)](#) Details regarding Intel's energy conservation commitments and progress can be found beginning on page 73.
7. [Intel's 2023-24 Corporate Responsibility Report \(CSR\)](#) Details regarding Intel's waste and circular economy commitments and progress can be found beginning on page 83.

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