

Ironwood TPU

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Ironwood TPU Latest News

Google recently introduced Ironwood, their seventh-generation Tensor Processing Unit (TPU), marking a pivotal leap in AI technology.

About Ironwood TPU

- It is **Google's seventh-generation Tensor Processing Unit (TPU)**.
 - **TPUs are custom-built chipsets** aimed at **AI and machine learning (ML) workflows**.
 - These accelerators **offer extremely high parallel processing**, especially **for deep learning-related tasks**, as well as significantly high power efficiency.
- **Designed specifically for inference** — a process where AI models make predictions based on learned data — **Ironwood is the most powerful, scalable, and energy-efficient TPU Google has ever developed**.
- Ironwood signifies a **shift from reactive AI models**, which respond to queries, **to proactive systems** that **generate insights independently**.

- This evolution defines what Google calls the “age of inference,” where **AI agents autonomously retrieve and synthesise data** to offer comprehensive answers, not just raw information.
- The Ironwood chip comes with a peak compute of 4,614 teraflops (TFLOP), which is a considerably higher throughput compared to its **predecessor, Trillium**.
- Google also plans to make these chipsets **available as clusters** to maximise the processing power **for higher-end AI workflows**.
- Ironwood can be scaled up to a **cluster** of 9,216 liquid-cooled chips **linked with an Inter-Chip Interconnect (ICI) network**.
- At its most expansive cluster, Ironwood chipsets can generate up to 42.5 exaflops of computing power.
- Google claimed that **its throughput is more than 24X of the compute generated by the world’s largest supercomputer, El Capitan**, which offers 1.7 Exaflops per pod.
- Ironwood TPUs also come with expanded memory, with each chipset offering 192GB, which is six times more than its predecessor, Trillium.

Source: **TH**

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