

Chinese AI chip reaches 45 billion calculations per second

Cixin P1, codename CP8180, is a SoC chip for computers and AI systems designed by Cixin Technology company, which is considered to be able to replace foreign AI chips in China.

Cixin P1 is built on the 6 nm Arm architecture, including a 12-core CPU clocked at 3.2 GHz, a 10-core GPU and an NPU neural processor capable of reaching 30 TOPS (billion operations per second), for overall processing performance up to 45 TOPS.



Cixin P1 launched on July 31, but details about this AI chip have not been completely announced. But it seems that Cixin has been licensed by Arm to design the CPU and GPU.

Information on Electronic Engineering Times China shows that the chip includes a CPU based on Arm v9.2-A architecture, configured with 8 high-performance cores and 4 energy-saving cores. The chip can be an Arm-designed RISC Cortex-A or Cortex-X processor, but can also be a variation of either architecture.

Although no specifications were given, the graphics processor uses Arm's Immortalis GPU, possibly the Immortalis-G720 fifth-generation GPU - a version designed for mobile gaming tasks and enhanced AI performance. .

Because Arm can only license up to 10 TOPS, the chip's NPU may come from another partner.

Cixin P1 is also equipped with a series of modern features, including LPDDR5-6400 memory and 16x PCIe 4.0 expansion, 4K 120 fp video output capability and compatibility from Windows, Android to China's Tongxin.

Cixin P1 is "one chip for many purposes". At the event, Cixin Technology demonstrated the chip on many products, such as laptops, PCs, servers, and mobile devices.

Although the goal of a completely domestically produced processor has not been met (due to the use of Arm's CPU and GPU designs), the successful manufacture of the Cixin P1 AI chip is a big step forward in the process of automation. semiconductor owners, compensating for the shortage of AI chips in the Chinese market.

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