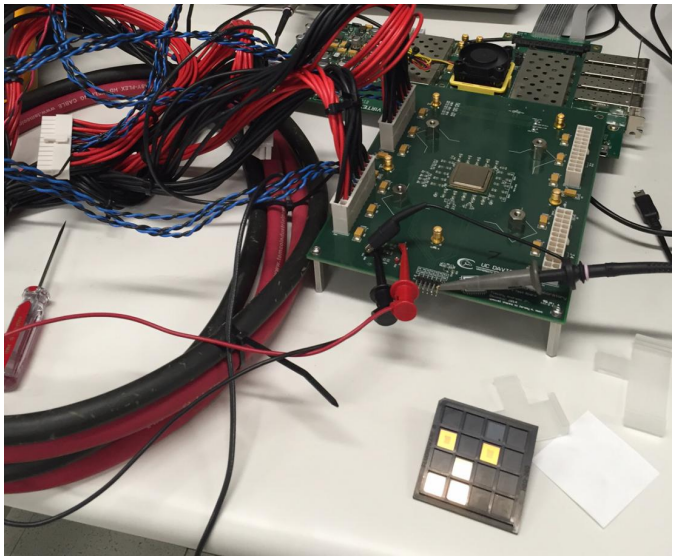
Researchers at UC Davis present a dramatic increase in the number of cores in a CPU-- as the name suggests the KiloCore processor packs no less than 1000 cores.



Making the KiloCore more impressive is the fact each core can be independently clocked to up to 1.78GHz and shut down independently when not in use. The result allows the CPU to handle up to 115 billion instruction per second while using just 0.7W of power, meaning it is so power efficient the researchers claim it can run on a single AA battery. All despite being built using an outdated 32nm CMOS process!

For the curious, each KiloCore core runs small programs independently of the others. As the announcement puts it, the idea is to break down applications into small pieces, with each running in parallel on different processors. The result brings about high throughput while using less power.

The researchers already have applications running on the KiloCore, including wireless coding/decoding, video processing and encryption. It also can crunch large amounts of parallel data in tasks such as scientific data applications and datacentre record processing.

Will the KiloCore hit retail shelves any time soon? Probably not, since most current PC applications are designed to run on a low number of highly clocked threads. However the design does provide valuable insight on the building of low-power multi-core processors for mobile device use.

Go World's First 1000-Core Chip