



Tachyum

PRODUCT BRIEF

## Tachyum Prodigy® T16192 Universal Processor

Tachyum's Prodigy is the first Universal Processor combining General Purpose Computing, High Performance Computing (HPC), Artificial Intelligence (AI), Deep Machine Learning, Explainable AI, Bio AI, and other AI disciplines within a single chip. It allows for a simple programming model and environment based on a coherent multiprocessor architecture.

The T16192 integrates 192 high-performance, 64-bit cores, 16 DDR5 memory controllers running up to DDR5-7200, and 96 lanes of PCIe 5.0 to address the most demanding applications for Exascale Supercomputing, Big AI, and Big Data.

### KEY FEATURES

#### High Performance Cores

- 192 64-bit cores in a single socket up to 5+ GHz
- 2 x 1024-bit vector processor
- Matrix operations accelerate deep learning
- Out-of-Order, 4 instructions per clock
- Virtualization and Advanced RAS

#### Fully Coherent Caches

- 64 KB I-Cache, 64 KB D-Cache, both with ECC
- 192 MB L2+L3 cache with DECTED ECC

#### Multiprocessor Support for 2P and 4P Systems

#### Memory Controllers

- 16 x DDR5 up to DDR5-7200
- Maximum 32 TB per socket

#### Integrated High Speed I/O

- 96 lanes PCI Express 5.0
- 48 PCIe Controllers

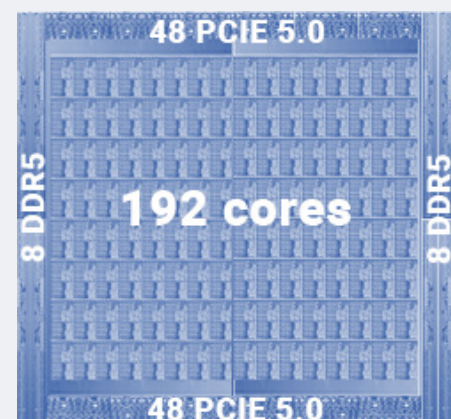
#### Additional Features

- 5nm Process Technology
- 64 x 84 mm FCLGA Package

#### High Performance Matrix and Vector Processing for AI/ML and HPC

- 60 AI PetaFLOPS - TAI
- 90 DP TeraFLOPS - HPC

#### Runs binaries for x86, Arm, and RISC-V in addition to native ISA



**A single processor**  
that delivers industry leading performance

