Tachyum Prodigy® T896 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 T896 integrates 96 high-performance, 64-bit cores, 8 DDR5-6400 memory controllers, and 48 lanes of PCIe 5.0 to address high-performance mainstream applications such as hyperscale data centers, databases, data analytics, and big data.

KEY FEATURES

High Performance Processor Subsystem

- 96 64-bit cores in a single socket up to 5+ GHz
- 2 x 1024-bit vector units per core
- 4096-bit matrix processor per core
- 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
- 96 MB L2+L3 cache with DECTED ECC

Multiprocessor Support for 2P and 4P Systems

High Speed Memory Controllers

- 8 x DDR5-6400
- Maximum 16 TB per socket

Integrated I/O

- 48 lanes PCI Express 5.0
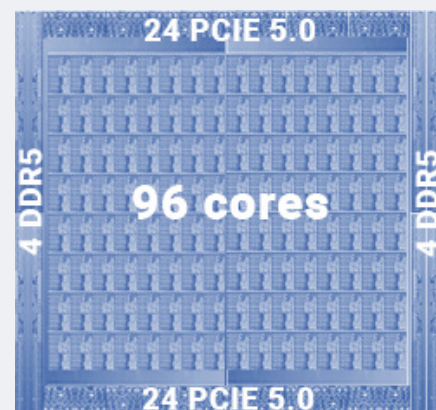- 24 PCIe Controllers

Additional Features

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

High Performance Matrix and Vector Processing for AI/ML and HPC*
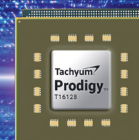
- 6 AI PetaFLOPS - Training and Inference
- 23 DP TeraFLOPS - HPC

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

*Preliminary specifications, may be subject to change

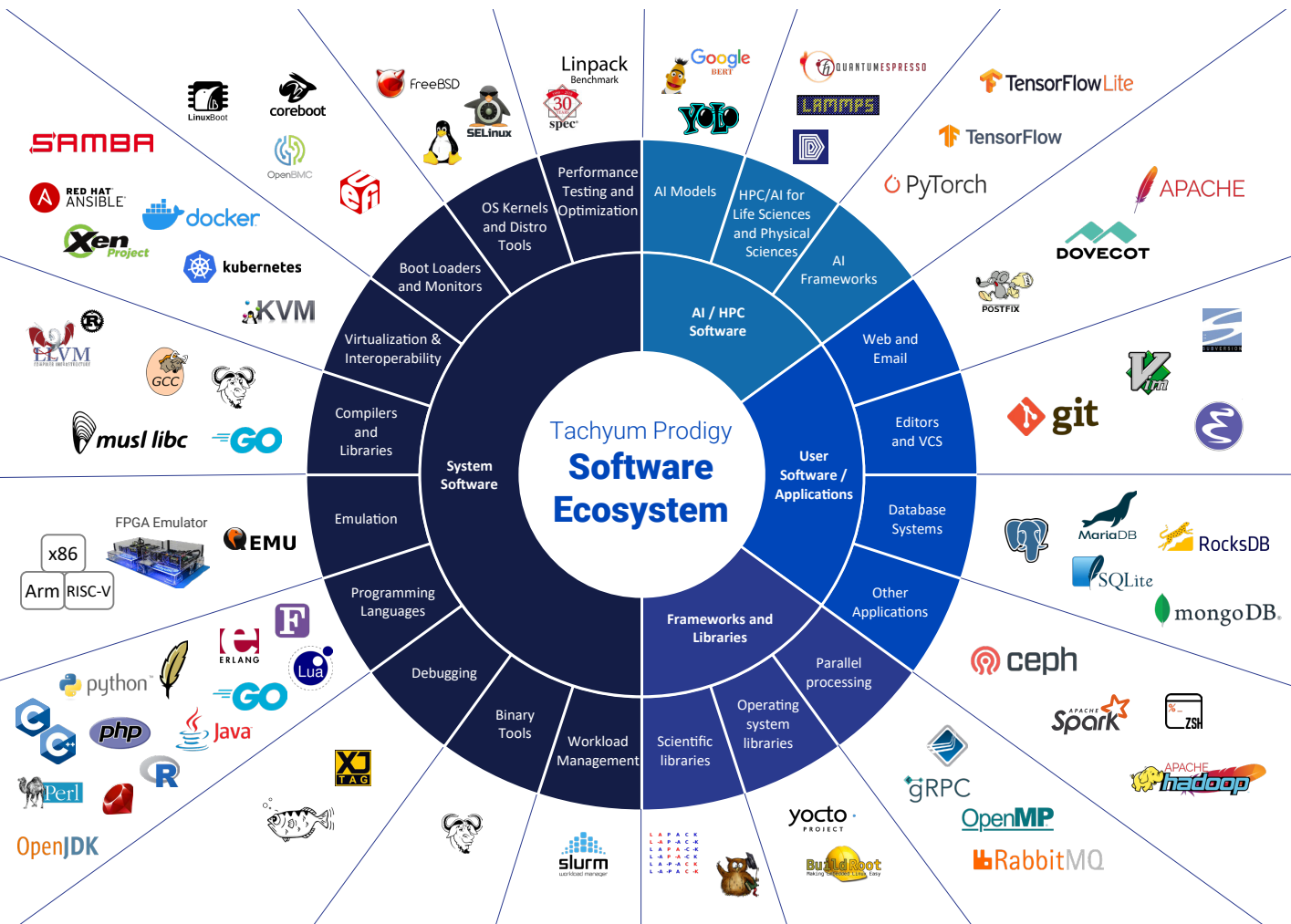**A single processor**
that delivers industry leading performance

Target Applications

 Cloud

 Data Analytics

 Big Data

 Databases

Prodigy Software Ecosystem

Prodigy has a rich ecosystem of development tools, operating systems, application software, and software libraries to enable fast, easy development and quick time to market.

Complete Software Ecosystem at tachyum.com/sw

Prodigy PB 896 v1.0_231202