

# Tachyum Prodigy® Series of Universal Processors

## PRODUCT BRIEF

Tachyum's Prodigy Series of Universal Processors is the first processor architecture that combines 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 Prodigy Series includes multiple SKUs with the top-end SKU integrating 256 high-performance, 64-bit cores, 16 DDR5 memory controllers running up to DDR5-7200, and 128 lanes of PCIe 5.0. The Prodigy Series SKUs are designed to address a wide range of applications that include exascale supercomputing, HPC, big AI, cloud/hyperscale, data analytics, big data, databases, and storage. Prodigy's top-end SKU features are highlighted below, and a table summarizing all the SKUs follows.

### KEY FEATURES - Prodigy Top-End

#### High Performance Cores

- 256 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, 8 instructions per clock
- Virtualization and Advanced RAS

#### Fully Coherent Caches

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

#### Multiprocessor Scalability for 2-socket and 4-socket Systems

#### Memory Controllers

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

#### Integrated High Speed I/O

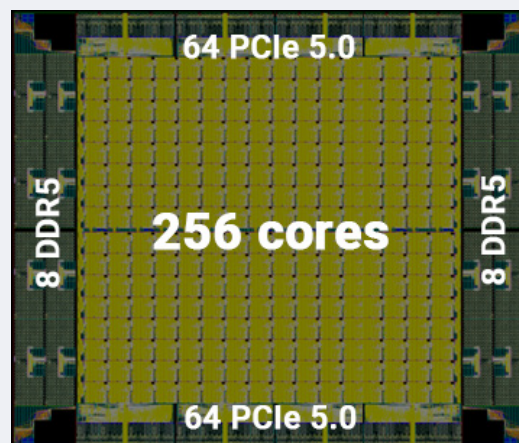
- 128 lanes PCI Express 5.0
- 64 PCIe Controllers

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

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

#### Runs Binaries for x86, Arm, and RISC-V in Addition to Native ISA

#### 5nm Process Technology



### TARGET APPLICATIONS



HPC, Big AI



Exascale  
Supercomputers



Cloud / Hyperscale



Edge / Telco



Big Data, Analytics,  
Databases, Storage



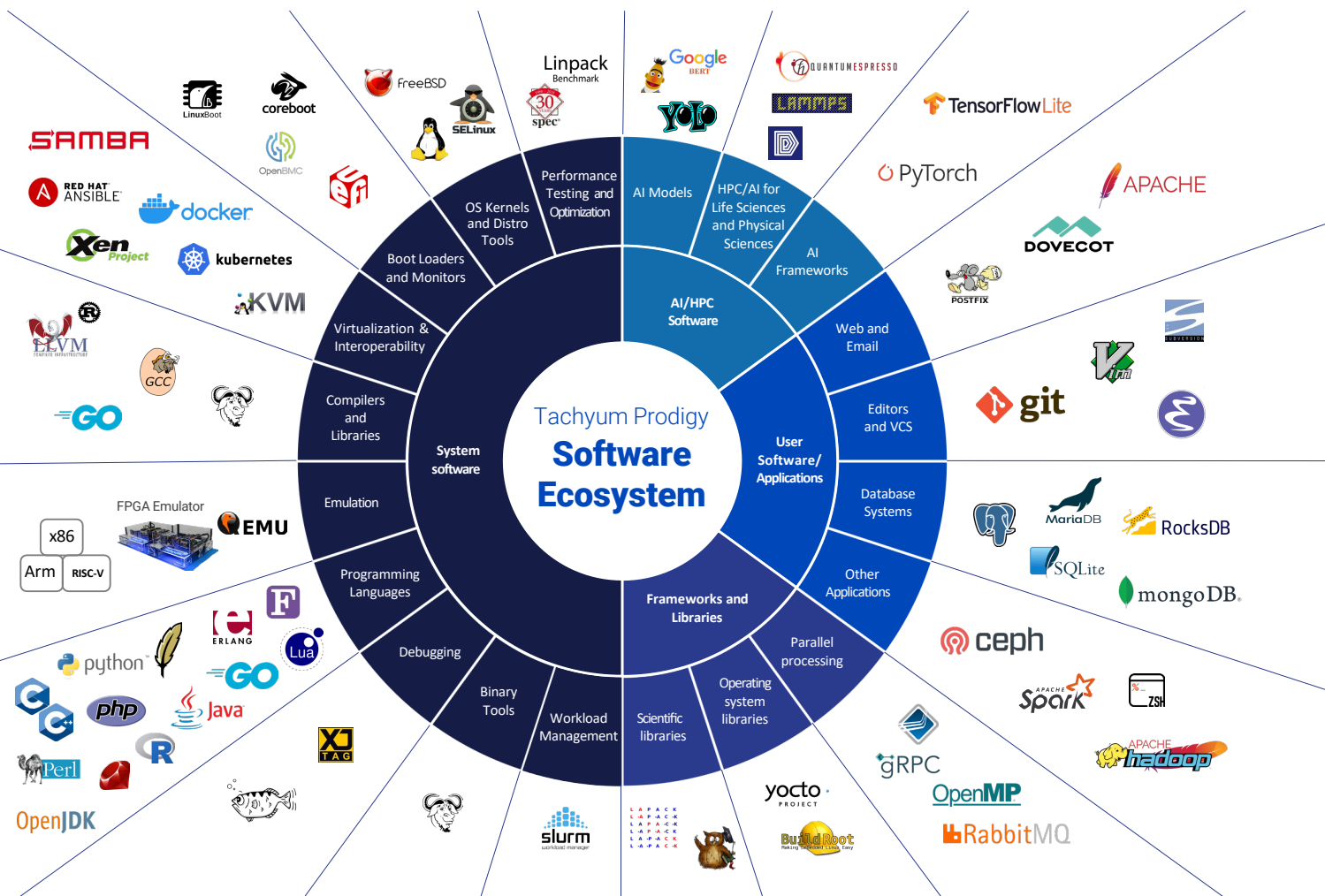
Crypto / Digital Currency

## Prodigy SKUs

SKU	Cores	Frequency (GHz)	Scalability	Memory Controllers	PCIe Lanes	TDP (W)	Applications
T16256-AIX	256	5.7	4S	16	96	1030	Top-End, HPC, Big AI
T16240-AIM	240	5.7	4S	16	96	965	Top/Mid HPC, Big AI
T16240-AIE	240	4.5	4S	16	96	760	Entry HPC, Big AI, Crypto/Digital Currency
T16192-HT	192	4.5	4S	16	96	605	Analytics, Big Data, In-Memory Databases
T16120-HS	120	5.7	2S	16	96	480	Cloud, Databases, Edge/Telco
T8120-EN	120	4.5	1S	8	48	380	Entry Cloud, Databases, Storage
T864-LP	64	3.2	1S	8	48	140	Low Power, Hosting, Storage

## 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 [www.tachyum.com/sw](http://www.tachyum.com/sw)



Scan the QR Code to discover our products

© 2025 Tachyum, Inc. All rights reserved. Tachyum® and Tachyum Prodigy® are trademarks of Tachyum Ltd, registered in the United States and other countries. All other brand and product names are trademarks of their respective owners. This document is provided for informational purposes only. Tachyum reserves the right, without notice, to make changes to this document or in product design or specifications. All statements regarding Tachyum's future direction and intent are subject to change or withdrawal without notice and represent goals and objectives only.