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

**Core**
- Up to 128 cores in a single socket
- 64 bit core with 512 bit vector operations
- AI/ML vector and matrix acceleration
- 4 instructions per clock up to 4GHz
- Virtualization and Advanced RAS

**Fully Coherent Caches**
- 32KB instruction cache with ECC
- 32KB data cache with ECC
- 64MB last level cache DECTED ECC

**Memory Controllers**
- 12 x DDR5 with 1 DIMM per channel
- DDR5 up to 4800 MT/s
- Max 512GB
- Advanced error correction and RAS

**Integrated I/O**
- 48 PCI Express 5.0 lanes, 36 controllers
- 2 x 400 Gigabit Ethernet

**Development Tools**
- FPGA emulator in December 2019
- Software emulator and binary translator
- C/C++ and Fortran compilers
- Debuggers and profilers
- TensorFlow compilers
- Linux operating system

**Applications**
- Big data and Big AI applications
- 262 Tflops AI training and inference
- 16 Tflops High Performance Computing
- Exascale supercomputers

**Package**
- FCBGA 85 x 85 mm