INTRODUCTION
In AI, ML, HPC, automotive and many other applications demand high performance math computing yet highly accurate results but today’s processors, systems, GPUs and accelerators suffer these features yet products are built with higher technology node. At VividSparks we are focused towards solving fundamental problems in computer arithmetic circuit designs. All our products are built with novel number system called POSIT.

PRODUCT OVERVIEW
> Tez is a world’s first POSIT based processor targeted towards automotive, IoT and edge computing applications
> RacEr is a world’s first POSIT VU9P targeted towards AI, HPC, ML and scientific computing applications

Tez
> Compatible for all Floating Point Instructions
> Shipped with world’s first POSIT based C/C++ and Fortran compiler called VividKompiler

RacEr
> VU9P architecture configurable up to 512 cores, more POSIT operations per watt, supports Floating Point equivalent POSIT instructions
> Supports CUDA equivalent programming model and shipped with VividKompiler
SOLUTION OVERVIEW

POSIT number system is alternative to IEEE-754 Floating Point (FP) number system with large dynamic range, better accuracy, less exceptions, no overflow and no under flow. POSIT number system require half data width with respect to IEEE-754 FP. For example, POSIT require 32 bits to compute 64 bits accuracy of equivalent IEEE-754 double precision FP. Reduced data width leads to less silicon usage, high performance, reduced power, less routing congestion, reduced memory usage and many more benefits! Our products are quite powerful in AI, ML, HPC and graphics computing applications keeping low memory requirements and high performance.

FEATURES

> Different POSIT precision configurations
> High throughput, low latency POSIT arithmetic operations
> Supports all floating point arithmetic operations
> Built with VivarithmetiK Carry Free Addition (CFA) technology

TAKE THE NEXT STEP

Learn more about VividSparks: https://www.vivid-sparks.com/
Please reach out for sales details - inquiry@vivid-sparks.com