



DIGITAL INDUSTRIES SOFTWARE

Veloce proFPGA CS Software Prototyping Platform

Highest performance and fully configurable system where designers can validate hardware/software integration with massive software workloads prior to silicon availability.

Benefits

- Optimized system architecture, timing driven Veloce Prototyping Software.
- Highest flexibility and configurability, all FPGA I/Os are user accessible.
- Quick and easy deployment, fast bring-up time and easy-to use.
- High debug productivity with advanced hardware and software-based debug capabilities.
- Lowest cost of entry, scaling from single FPGA desktop to multiblade FPGA farm in datacenters

Summary

Veloce™ proFPGA CS architecture is designed for performance based on the latest FPGA devices technology. The Veloce proFPGA CS software maximizes the performance of a multi-FPGA design implementation, in the fully automatic or user guided modes.

The system is cost-effective with its modular and scalable architecture. Starting with a single FPGA system on the desktop, or the new interconnectable multi-FPGA blade system, it's possible to efficiently expand to a multi-user prototyping farm with hundreds of blades.

With the flexibility offered by the accessibility to all FPGA IOs, the user can configure the prototype with a comprehensive suite of at-speed hardware interfaces, memories, speed-bridges and interconnect cables to mimic the real system operations.

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Features

- Next-generation prototype system based on the latest FPGA device technology.
- Runtime performance up to 100+ MHz
- Capacity per rack up to 4 Billion gates
- Up to 60 concurrent users with single FPGA granularity per rack
- 2X the gate density versus previous Veloce proFPGA
- Works equally well in the lab, field and modern data centers

The design bring-up on the prototype is accelerated by a set of users’ software tools that automate the most tedious task for mapping the design on single or multi-FPGA prototyping configurations and achieve the highest possible performance in a fully automated or user guided approach.

Accelerating Software Validation

Massive software workloads need high performance prototyping systems with no capacity limitations and full configurability for mastering the product release schedule and accelerating the silicon bring-up.

Accelerating prototyping bring-up is essential for being able to maximize the benefits of the platform prior the silicon tape out: Veloce proFPGA and Veloce Prototyping Software is a winning combination.

Veloce proFPGA CS is the performance industry -leading prototyping platform to address the IC industry’s growing challenges to execute massive software workloads before design tapeout, configure the testbench environment to model the real system operations prior the silicon availability.

Improvements over previous generation Veloce proFPGA:

- 2X gate capacity
- 2X faster performance
- 50X better debug throughput with full visibility

Veloce proFPGA CS has a new, highly scalable, and interconnectable blade architecture addressing the diverse demands for a single blade system on the lab, to a full enterprise scale prototyping farm with hundreds of blades.

The productivity is further boosted by the VPS solution: bring-up time is accelerated, performance is optimized on single and across multiple FPGAs , debug efficiency is maximized.

Veloce Hardware	Veloce proFPGA CS
Maximum Frequency	100+ MHz
HexaBlade Capacity	Up to 400 Million gates
Maximum Capacity per rack	Up to 4 Billion gates
Number of Users per rack	Up to 60 users
Maximum Power per rack	<2 kWatts
Protocols	Supports latest protocols for market verticals with PCIe, UCIe, Ethernet, 5G, AMBA, JTAG etc...

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For additional numbers, click [here](#).