



DIGITAL INDUSTRIES SOFTWARE

Veloce Strato CS Emulation Platform

Delivers industry-leading performance at an enterprise scale, with full visibility, for hardware, software, and system verification and validation

Benefits

- Accelerate and shift-left design verification and validation
- Quick design iterations, less than a day for large designs
- Fast compile with deterministic results
- Full visibility and advanced workflows for fast and efficient debug
- Execute dynamic workloads ranging from single very large designs to numerous simultaneous smaller designs
- Congruent with Veloce Primo CS platform, for highest throughput and ROI

Summary

Veloce™ Strato CS is an emulator with all key technology elements developed coherently by Siemens. Innovation from the chip to the system hardware to the software delivers best-in-class performance, fast and deterministic compiles, a step-function improvement in runtime and debug throughput. It is compliant with modern data center requirements and has the best power per gate efficiency .

A comprehensive suite of Veloce Apps and Protocol Solutions, enable the use-modes for simulation acceleration, power and performance analysis, software-enabled validation, functional safety, and full system validation in virtual, hybrid and in-circuit emulation environments.

Features

- Next-generation, purpose-built accelerator CrystalX Chip
- Runtime performance up to 5MHz
- Capacity up to 40+ billion gates
- Concurrent users up to 1024
- 2X the gate density and 2X better power/gate versus Veloce Strato+
- Fully compliant with modern data centers

An Evolving IC Landscape

Product development requirements and complexity are evolving rapidly and growing, with the added challenges of shorter time-to-market schedules and limited resources.

A fast, scalable and reliable platform is needed to engage the hardware and software teams early in the development phase and verify their product with the right features and technology.

Veloce Strato CS is the industry-leading emulation platform to address the IC industry’s growing challenges to execute workloads faster, manage high-capacity designs and increase productivity. Improvements over previous generation Veloce Strato+:

- 4X gate capacity; granularity from 40 million to 40+ billion gates design
- 5X faster performance
- 5X better debug throughput with full visibility

Veloce Strato CS has a new, highly scalable and interconnectable blade architecture. This addresses diverse usage demands from a single blade system, to a full enterprise scale emulation factory with hundreds of blades. It is also designed for data centers, hot-isle /cold-isle air flow. Requires only air-cooling and consumes half the power per gate compared to Veloce Strato+.

The Veloce CS hardware and software architecture enables full congruency across its emulation and enterprise prototyping platforms to quickly bring-up environments in prototyping and move seamlessly across platforms. Combined benefits:

- 10X acceleration on workload execution and debug cycles
- 5X improvement on total cost of ownership (TCO)

| Veloce Hardware | Veloce Strato CS |
|------------------|--|
| Max Frequency | Up to 5MHz |
| Blade Capacity | Up to 170 Million gates |
| Maximum Capacity | Up to 40+ Billion gates |
| Number of Users | Up to 1024 Users |
| Maximum Power | <2 kWatts per blade |
| Use-modes | Simulation acceleration, software-enabled verification, full system validation in virtual mode, hybrid mode or in-circuit emulation... |
| Applications | Address verification requirements such and power, DFT, coverage closure, functional safety, software-enabled verification and debug |
| Protocols | Supports latest protocols for market verticals with PCIe, UCIe, CXL, Ethernet, 5G, AMBA, JTAG... |

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