VELA PERFORMANCE
POWERED BY ADVANTECH

HIGH-PERFORMANCE INDUSTRIAL COMPUTING

High-Performance Industrial Computing for Complex & Data-Intensive Workloads

Configurable industrial computing for demanding applications that need greater processing power, memory capacity and storage performance. Built around Advantech hardware, configured to your requirements and supported by Impulse Embedded.



High-Speed Data Acquisition • Test & Measurement • Advanced Process Control

Available in Tower, 2U and 4U chassis | www.impulse-embedded.co.uk

WHY CHOOSE THIS PLATFORM

More Power. More Headroom. More Possibilities.

VELA Performance is built around the Advantech AIMB-788 industrial ATX motherboard, selected for its expansion, connectivity, memory capacity and long-term platform flexibility. It provides a dependable foundation for demanding, data-intensive applications while giving us the flexibility to adapt configurations over the life of the platform.

1

Processor Flexibility & Supply Continuity

Support for Bartlett Lake and 12th to 14th Gen Intel Core processors improves supply continuity without compromising performance or requiring a change of platform, helping maintain software and driver compatibility. The AIMB-788 is based on Intel's Q670E chipset.

2

Memory Headroom for Demanding Workloads

Four DIMM sockets support up to 128GB DDR4 3200 memory, providing significantly more capacity for large datasets, concurrent applications and memory-intensive industrial software.

3

Security & Remote Manageability

With the optional dTPM 2.0 module and compatible processor, the platform supports TPM and Intel vPro technologies, alongside Intel AMT for remote management and support.

4

Flexible Storage & RAID Options

PCIe Gen4 NVMe provides fast primary storage, with RAID options available on selected configurations for improved performance or data resilience.

5

Expansion for Specialist Hardware

Multiple PCIe slots, alongside legacy PCI support, provide room for data-acquisition cards, frame grabbers, specialist communications interfaces and industrial I/O without forcing the application onto a more specialised platform.

Built with in-stock components for quick dispatch and long-term support. Backed by a 3-year return-to-base warranty.

DESIGNED FOR

High Performance, Built for Industrial Deployment

Across laboratories, test benches, production lines and control rooms, the VELA Performance series gives engineers and system integrators the headroom to run demanding software, larger datasets and keep pace with data-intensive workloads, without the cost or complexity of a specialist GPU or server platform.

High-Speed Data Acquisiton

Leverages processing power, memory capacity and fast NVMe storage to capture, store and process large volumes of information from data-acquistion hardware and connected devices.

Test & Measurement

Computing headroom for automated test, validation and measurement systems, operating specialist software, managing connected hardware and processing results quickly.

Advanced Process Control

Additional processing and memory capacity for complex control applications involving multiple software services, large numbers of connected devices or continuous data analysis

Industrial Data Processing

Strong CPU performance and storage throughput for systems that need to process substantial volumes of operational or production data locally.

Automated Test Systems

Reliable, high-throughput computing for automated test rigs and validation systems running continuously in industrial environments.

Scientific Computing

Configurable processing, memory and storage to support demanding research, analysis and laboratory instrumentation workloads.

Production Data Analysis

The processing and memory headroom to analyse production and sensor data in real time, supporting monitoring and decision-making on the factory floor.

Multi-Application Workloads

Sufficient processing and memory capacity to run multiple concurrent software processes reliably on a single industrial platform.

CHOOSE YOUR CHASSIS

Configured Around Your Application



Tower

A standalone industrial computer for factory floors, laboratories and control rooms where rackmount installation isn't required.



2U Rackmount

A compact rackmount platform for high-performance processing and fast storage in a space-efficient installation.



4U Rackmount

A rackmount platform with greater expansion and storage capability, including RAID 0/1/5/10 configurations.

What the platform can support

- 12th to 14th Gen Intel Core processors
- Up to 128GB DDR4 3200 memory
- PCIe Gen4 and legacy PCI expansion
- PCIe Gen4 NVMe & configurable storage
- TPM 2.0, Intel vPro & AMT manageability

Let's Configure Your VELA Performance System

Speak to our team about your application, expansion requirements, software setup or customisation needs. We can help you choose a proven configuration or create something more bespoke.

Call: +44 (0)1782 337 800 | Email: sales@impulse-embedded.co.uk