



## Cervoz Storage Solution Delivers Incredible Agility with Infinite Possibilities for Embedded Systems

Embedded systems are a part of our everyday life. They are designed for specific tasks compared to general-purpose computers. When enterprises first deployed embedded systems, the sheer volume of data that AI, the Internet of Things (IoT), and other advanced technologies would generate was inconceivable to the system architects. Simply put, as the IoT boom continues, these embedded systems will constantly generate a massive influx of data that will need to be channeled and processed. Meanwhile, the increasing scalability of connected devices in any industrial application requires highly reliable communication products. Hence a demand for industrial storage is rapidly growing.

### Requirement for an Embedded System

Unlike typical computers that allow users to perform multiple tasks simultaneously, embedded systems are task-specific and are expected to function for extended periods even in a harsh environment.



#### Space Constraint

An Embedded system may be part of larger computer systems or self-contained systems. Due to space constraints, maintenance can be extremely difficult for all the electronic components in compact industrial PCs, especially for those deployed in hard-to-reach locations, such as space stations and undersea installations.



#### Uninterrupted Operation

Embedded systems typically provide 24-hour uninterrupted operation to sustain the running applications and provide constant services.



#### Work in Extreme Environments

It must dissipate heat effectively, operate reliably for long periods and withstand environmental hazards such as extreme temperatures, dust, humidity, and shock/vibration.



#### Expandable & Flexible

An industrial compact PC contains numerous PCIe slots, multiple storage form factor slots, communication interfaces, and expandable memory to meet various requirements of industrial applications.

### Cervoz Memory and Storage for Embedded Systems

A perfect memory and storage solution for an industrial PC is one that is highly reliable, stable, power-efficient, and capable of constant operation under diverse workloads in harsh environments.



#### Breaking Limitation – Cervoz Storage Solutions for Space-Constrained Devices.

Cervoz offers a range of 3D TLC-based storage solutions in diverse form factors, from mainstream [2.5"SSD](#) to slim and compact embedded modules including [M.2 2242/2280](#), [mSATA](#), [Half-size mSATA](#), and [Half Slim](#).

Cervoz industrial-grade NVMe PCIe Gen4x4 SSD features the latest NAND technology with large storage capacities, offering temperature tolerance from -40°C~85°C. Cervoz NVMe PCIe Gen4x4 SSD's speed is 3.5 times faster when compared to Gen3x4 SSD. It greatly benefits industrial PC applications, especially for server and cloud computing.



#### Handling Large Data Sets for High-Performance Embedded Applications

Cervoz [DDR5](#) is set to offer more efficient and faster memory with higher capacities and less power consumption. Applications for the Cervoz DDR5 industrial wide temperature memory products include usage in edge computing, high-performance servers, and any industrial PC related applications.



#### Keeping it Cool - Well-Designed Heat Dissipation Solutions

The design goals of industrial computers include miniaturization, increased performance, longer product life, and silent operation. These goals run counter to effective thermal management, and designers face the prospect of sacrificing performance to handle the excessive heat that modern ICs generate. Cervoz offers comprehensive [solutions for overheating](#), including the Dynamic Thermal Throttling mechanism, which activates automatically to cool the SSD down.



#### Round-the-clock Uninterrupted Operations to Boost Efficiency

Power loss protection is a crucial mechanism to protect data stored in an SSD during a power outage, which is critical in the reliability of the embedded system. [Cervoz Powerguard](#) function for the flash module is designed to prevent data loss and ensure the stability of data transmission during an unstable power supply situation. It's a must-have technology for industrial computers in any application.



#### Instantly Expand Connections

Cervoz meets the demand of today's industrial computers: multi-functionality, performance, speed, and endurance in the face of many challenges. There is no one-size-fits-all computer to fulfill all the needs of different industrial applications. Still, with modular expansion cards, industrial PCs can extend their computers with more functionality. At Cervoz, we are in the business of designing and developing [modular expansion card \(MEC\)](#) products for different functions. The Cervoz expansion cards provide extra I/O ports, technology, and functions. With Cervoz MEC products, Industrial PC systems can do more.

Whether we're walking around with any advanced technologies or not, it is evident that the range of industries for embedded systems continues to expand. It means data volumes will continue to increase and the need for more storages that are faster, longer-lasting, and more resistant to different harsh environments will rise. Cervoz delivers a rich portfolio of high-quality industrial-grade storage and memory products for embedded systems in various applications, such as Factory Automation, Healthcare, Defense and Military, Transportation, and Telecommunication Networks, among many others. Contact [Cervoz](#) for more industrial solutions.

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