



SOLUTION BRIEF

A Flexible Microserver Solution for Diverse Intelligent Industrial Control Systems

Versatile platform for a range of industrial control applications

- PCI Express architecture to support an array of COTS PCIe cards
- 15 PCIe slots provide the capacity to scale resources to meet future requirements
- Support for powerful GPU and FPGA accelerator cards
- 3U x 510 mm deep for 19" racks
- Industrial life cycle support

Today's technology has created many devices to improve and optimize industrial processes. The application of these smart industrial controllers, robots, actuators, and sensors has also created a series of challenges to existing Operational Technology (OT) and Information Technology (IT) networks and infrastructure. These challenges include integrating all of this data and technology into robust control systems, at the same time as managing and utilizing this wealth of new data.

Servers used in these intelligent industrial control systems need to be a highly flexible and scalable to adapt to the variety of industrial requirements. These systems need to aggregate and process data near the data sources; while integrating network, computing, and storage functions on premise, prior to interfacing to the cloud. Industrial servers need to provide the following functionality

to fully utilize the information generated in smart industrial systems:

- The capability to interface to a wide range of devices and network protocols.
- The flexibility and scalability to add a variety of compute and acceleration resources as application requirements grow.
- Provide extensive storage capacity for large data sets; for on premise data analysis, or for transfer to the cloud.
- Capable of hosting a hybrid cloud architecture including virtualization of resources.

The requirements of an intelligent industrial servers are unique. Typical servers available to today do not offer the flexibility and scalability, or the industrial life cycle required for these applications. How can Artesyn help address these challenges? With our unique MaxCore™ microserver product line.



The MaxCore and MaxCore IPC Platforms



Flexibility, Versatility and a Future-Proof Design

The Artesyn MaxCore™ platform offers a unique system architecture which permits tailoring the microserver platform to a variety of applications and system requirements. The platform can be configured to support a wide range of compute and acceleration resources, storage capacity, and network interfaces. The MaxCore platform can support up to 15 standard PCI Express (PCIe) card slots and utilizes PCIe ExpressFabric to permit a software-defined infrastructure with high bandwidth and low latency. It also supports remote management simplifying configuration maintenance of the platform.

The MaxCore platform utilizes a variety Artesyn CPU microserver cards where you can select the quantity of CPUs and cores based on the application compute requirements. The remaining PCIe slots can be configured with any standard PCIe card to provide CPU accelerators, storage, and a wide range of network and I/O cards. The MaxCore platform supports up to four SATA drive bays to provide a large storage capacity in addition to the ability to utilize NVMe M.2 SSD modules through PCIe carrier cards. This flexibility allows for a wide range of applications and configurations all using the same server platform, simplifying overall control system architecture.

Ordering Information

MaxCore Family	Part Number	Description
MaxCore Platform	MC3000	3U server with scalable Intel® Xeon® Processor D server add-in cards, 2x 1/10G I/O, 4x 2.5" SATA drive bays
MaxCore IPC Platform	MC1000	3U IPC, Intel Xeon Processor D-1521, 4x DDR4 DIMM slots, 2x 100/1000BaseT RJ-45

Key benefits and functionality:

- PCIe architecture flexibility
- Large PCIe slot capacity – 15 slots
- High speed PCIe ExpressFabric supporting platform virtualization
- Integration of any number of Artesyn PCIe CPU cards to optimize compute resources
- Large PCIe slot capacity to accommodate a range and number of compute, accelerator, I/O, or networking cards
- Large storage capacity via SATA or NVMe PCIe interfaces
- High bandwidth switching capacity up to 100GB through dedicated Artesyn Network Interface Cards

The MaxCore's large PCIe slot capacity provides flexibility and ability to upgrade the system over time. For initial control system deployments, users may elect to collect and analyze data first, then scale up additional control functions. The MaxCore platform can scale up resources and interfaces as needed to grow with the adoption of additional internet enabled devices.

New industrial devices, controllers and sensors provide the capabilities to highly optimize industrial processes. Let Artesyn and the MaxCore platform provide a powerful and flexible solution to help you leverage this new architecture.

Interested?

If you find this interesting, connect with your Artesyn Application Engineering team for an in-depth discussion of your particular requirements, a demo or a test system now!

www.artesyn.com

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