



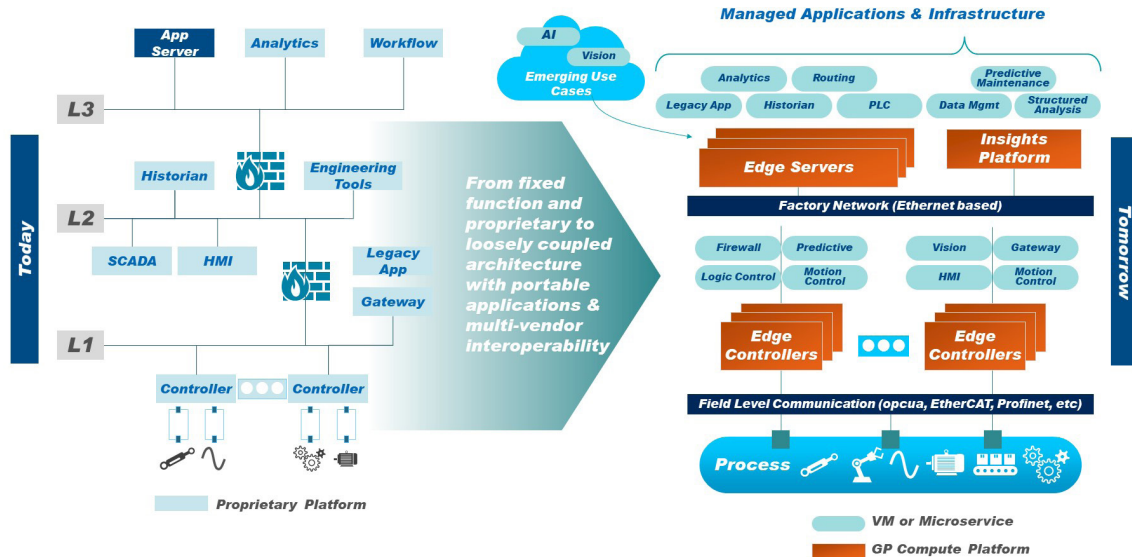
DFI

When "virtualization" and "immediacy" are no longer mutually exclusive along with OOB remote management

Industry transformation to software-defined and edge AI computing

The industrial computing landscape is shifting towards software-defined architectures and edge AI computing. Traditional industrial systems that relied on fixed hardware configurations are now embracing virtualization, enabling flexible resource allocation and enhanced system efficiency. Edge AI computing further enhances industrial automation by enabling real-time processing at the network edge, reducing latency and optimizing decision-making. This transformation is driving industries such as manufacturing, logistics, and energy to adopt intelligent, adaptable computing solutions for greater operational efficiency.

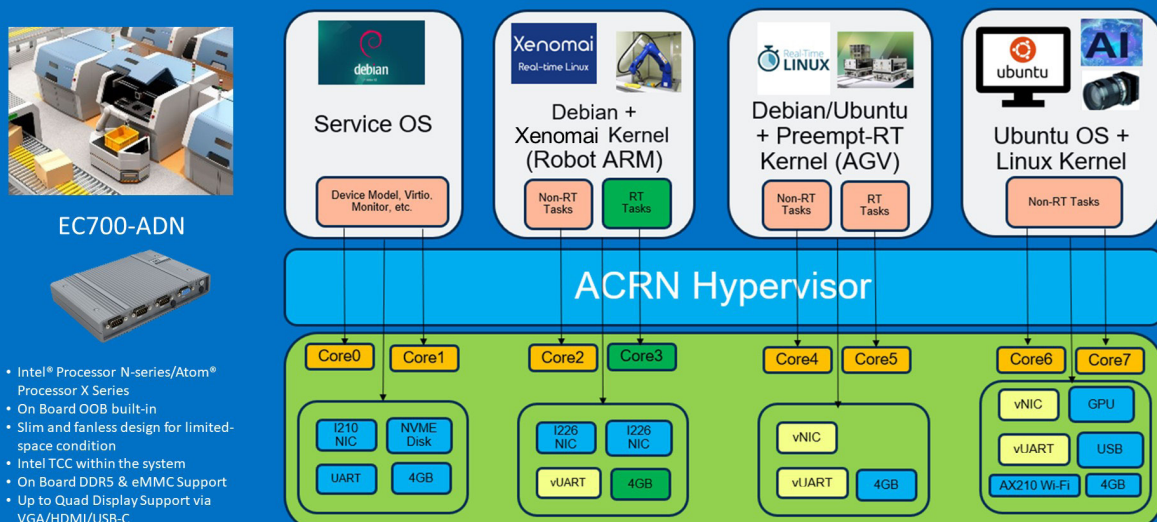
On The Way To “Software Defined AIoT”



When workload consolidation harmonizes real-time

Industrial workloads have traditionally been separated due to the need for deterministic real-time computing. However, advancements in hypervisor technology, hardware acceleration, and low-latency networking now allow real-time applications to coexist with virtualized workloads without compromising performance. By consolidating multiple workloads on a single industrial computer, businesses can reduce hardware footprint, lower power consumption, and streamline system management. This convergence of real-time and virtualized computing enables industries to enhance automation, improve production efficiency, and increase system reliability.

ACRN Workload Consolidation Demo for DFI AMR+Robot Arm



Unplanned downtime is the must to avoid

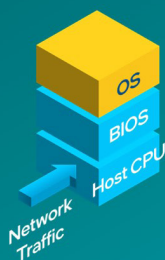
Unplanned downtime in industrial environments can lead to significant financial losses, safety risks, and production disruptions. System failures, network interruptions, and software crashes can have cascading effects on manufacturing lines and industrial operations. To mitigate these risks, companies must implement proactive monitoring, predictive maintenance, and failover strategies. Remote management solutions with real-time diagnostics and automated recovery mechanisms are crucial to ensuring continuous uptime and minimizing costly disruptions in industrial applications.

DFI in-house low-cost OOB management reduces TCO and improves ESG

DFI's in-house out-of-band (OOB) remote management solution provides a cost-effective and reliable approach for managing industrial computers. By enabling remote access and troubleshooting even when primary networks are down, OOB management ensures minimal downtime and reduced on-site maintenance costs. This significantly lowers the total cost of ownership (TCO) while enhancing system resilience. Additionally, OOB remote management contributes to ESG (Environmental, Social, and Governance) goals by reducing energy consumption, optimizing resource allocation, and minimizing the carbon footprint associated with on-site maintenance visits. DFI's innovative OOB solution exemplifies a forward-thinking strategy for industrial computing, offering both operational efficiency and sustainability.

INB (In-Band) and OOB (Out-Of-Band)

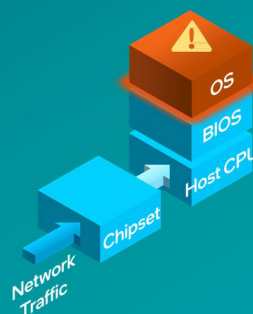
In Band (INB) Manageability



Consoles communicate with devices using standard networking capability when the Host OS is operational.

- Provides capability to update FW, SW when OS is operational.
- Built above the OS.

Out of Band (OOB) Manageability



Uses an out-of-band connection that operates independent of the Host OS and provides persistent connectivity

- Fixes system issues, even when the OS is down
- Built below the OS. Has hardware/platform dependency.



Founded in 1981, DFI is a global leading provider of high-performance computing technology across multiple embedded industries. With its innovative design and premium quality management system, DFI's industrial-grade solutions enable customers to optimize their equipment and ensure high reliability, long-term life cycle, and 24/7 durability in a breadth of markets including factory automation, medical, gaming, transportation, smart energy, defense, and intelligent retail.

www.dfi.com / inquiry@dfi.com / +886 (2) 2697-2986