Marbella AI-F140

Edge AI Analytics Product powered by Intel Flex

Product Description

Silicom Marbella Platform and Intel Flex 140 Card Deliver Unprecedented Insights and Power Efficiency

Edge analytics has become a game-changer in the world of data processing and analytics, allowing organizations to unlock real-time insights and improve operational efficiency. In this article, we explore the powerful collaboration between the Intel Flex 140 card and Silicom's Marbella platform, which is revolutionizing edge analytics. By combining the exceptional computational capabilities of the Intel Flex 140 card with the robust edge computing environment of the Silicom Marbella platform, organizations can leverage advanced analytics at the network edge, enabling faster decision-making and power efficiency.

Powered by Flex-140

Silicom Marbella Platform: Enabling Efficient Edge Computing:

Silicom's Marbella platform, a versatile networking appliance designed for edge computing. Equipped with high-performance Intel Xeon-D processors, ample memory, and flexible connectivity options, the Marbella platform provides a scalable and efficient environment for edge analytics workloads. Its compact form factor and rugged design enable seamless integration into various edge environments, making it an ideal choice for industries such as manufacturing, telecommunications, and IoT.

The Intel Flex 140 Card: Empowering Edge Analytics:

Complementing the Silicom's Marbella platform, the Intel Flex 140 card, a cutting-edge data center GPU, is at the heart of this AI solution. With its Intel Xe architecture and 12 GB of high-bandwidth memory, this card delivers outstanding performance for deep learning and AI inferencing. Its parallel processing capabilities enable accelerated data analysis, while its low-power consumption and compact design make it ideal for edge computing deployments. The Intel Flex 140 card empowers organizations with the computational power needed to extract valuable insights from data at the network edge.

Synergistic Integration for Optimal Performance:

The integration of the Intel Flex 140 card with the Silicom Marbella platform creates a powerful synergy that takes edge analytics to new heights. The Marbella platform acts as a gateway for data collection and local processing, while the Intel Flex 140 card enhances data processing capabilities, enabling accelerated AI inferencing and deep learning tasks. This integration results in reduced latency, improved efficiency, and real-time insights, enabling organizations to make data-driven decisions at the network edge.

Unleashing the Potential of Edge Analytics:

The collaboration between the Intel Flex 140 card and Silicom Marbella platform revolutionizes edge analytics, enabling organizations to harness the full potential of their data. With this powerful combination, businesses can perform real-time analysis, detect anomalies, and predict outcomes with exceptional accuracy. Industries such as manufacturing, energy, and transportation can leverage edge analytics for predictive maintenance, quality control, and intelligent monitoring. The result is enhanced operational efficiency, reduced costs, and improved customer satisfaction.

Driving Innovation and Competitive Advantage:

The integration of the Intel Flex 140 card and Silicom Marbella platform empowers organizations to stay ahead in the era of data-driven decision-making. By processing and analyzing data at the network edge, businesses can react swiftly to changing conditions, minimize data transfer costs, and maintain data privacy. Edge analytics powered by this collaboration drives innovation, enabling organizations to uncover hidden insights, optimize processes, and gain a competitive edge in their respective industries.

The collaboration between the Intel Flex 140 card and Silicom Marbella platform offers a transformative solution for edge analytics. With accelerated data processing capabilities and a robust edge computing environment, organizations can extract real-time insights, improve efficiency, and drive innovation. Edge analytics powered by the Intel Flex 140 card and Silicom Marbella platform is paving the way for a future where data-driven decisions are made at the network edge, unlocking new opportunities, and delivering unparalleled business value.

Key Features

- Intel® Xeon® D-1700 Platform. Support 4,8, and 10-core CPU SKUs
- Memory support up to 256GB DDR4
- Supports a Dual x4 PCIe NVMe
- Networking
    - 4x 10G/25G SFP28 (support for 10G RJ45)
    - 4x 1G/10G SFP+
    - 3x 2.5G RJ45
    - 1x 1GbE MGMT
- Commercial and Industrial Temperature Options
- Redundant AC or DC Power Supplies
- Short Depth Enclosure (12”/305mm)
- PCIe Expansion
    - x16 Gen4 Full-Height ¾-Length
    - x8 Gen3 Half-Height Half-Lenth
- Support LTE/5G and Timesync modules
- BMC with in-band support
- Powered by Intel Flex 140 processor optimized for media stream density and quality.

Technical Specifications

General Technical Specifications	
CPU:	Intel® Xeon® D-1700. Support for 4,8, and 10-core SKUs
Memory:	3x Channels DDR4, Supports up to 256GB
Storage:	• eMMC (4GB to 256GB) • Two NVMe (x4 PCIe) • Two 2.5” SATA
Network:	• 4x 25G/10G SFP28 (SKU and Configuration Dependent) • 4x 10G/1G SFP+ (SKU and Configuration Dependent) • 3x 2.5GbE (Intel i226) • 1x 1GbE (BMC Management)
AI accelerator:	• Intel Flex 140 processor optimized for media stream density and quality • Execution Units – 256 • Render Slices – 4 • Graphics Max Dynamic Clock – 1950 MHz • Graphics Base Clock – 1600 MHz • Memory Size – 12 GB
I/O:	• 2x USB3/2 • Console: Cisco RS232 RJ45
PCIe Expansion:	• x16 PCIe Gen4 Full Height, ¾ Length Card • x8 PCIe Gen3 Half Height, Half Length Card
Cellular (Optional card)	• Supports optional wireless modules (4G and 5G options) • Antenna access through extender
TimeSync (Optional card)	• External SMA source inputs are 10MHz, PPS, and GNSS/GPS • External SMA outputs are 10MHz and PPS
BMC:	• AST2620 (no video, option for extended temperature) • NCSI to CPU for optional in-band management • Thermal monitor/fan control (up to 7) • Remote updates • Remote Power Management • Virtual USB • Serial over LAN
Security:	• TPM2.0 • Hardware Root of Trust • Intrusion switch
Other:	• Power / Reset Buttons (programmable) • RGB LED’s
BIOS:	• UEFI BIOS (Consider open-source solution) • Optional Redundant BIOS
Power Supply:	• Redundant 500W Pluggable Power Supply • AC and DC Options
Environmental:	• Commercial SKU: 0C to 40C • Industrial SKU: -20C to 65C
Form Factor:	• 12 inches (305mm) Depth • 19” Rackmount

Order Information

P/N	Description	Notes
80500-0217-E02	Marbella AI-F, 4-core, 8-core and 10-core, Intel Flex 140	