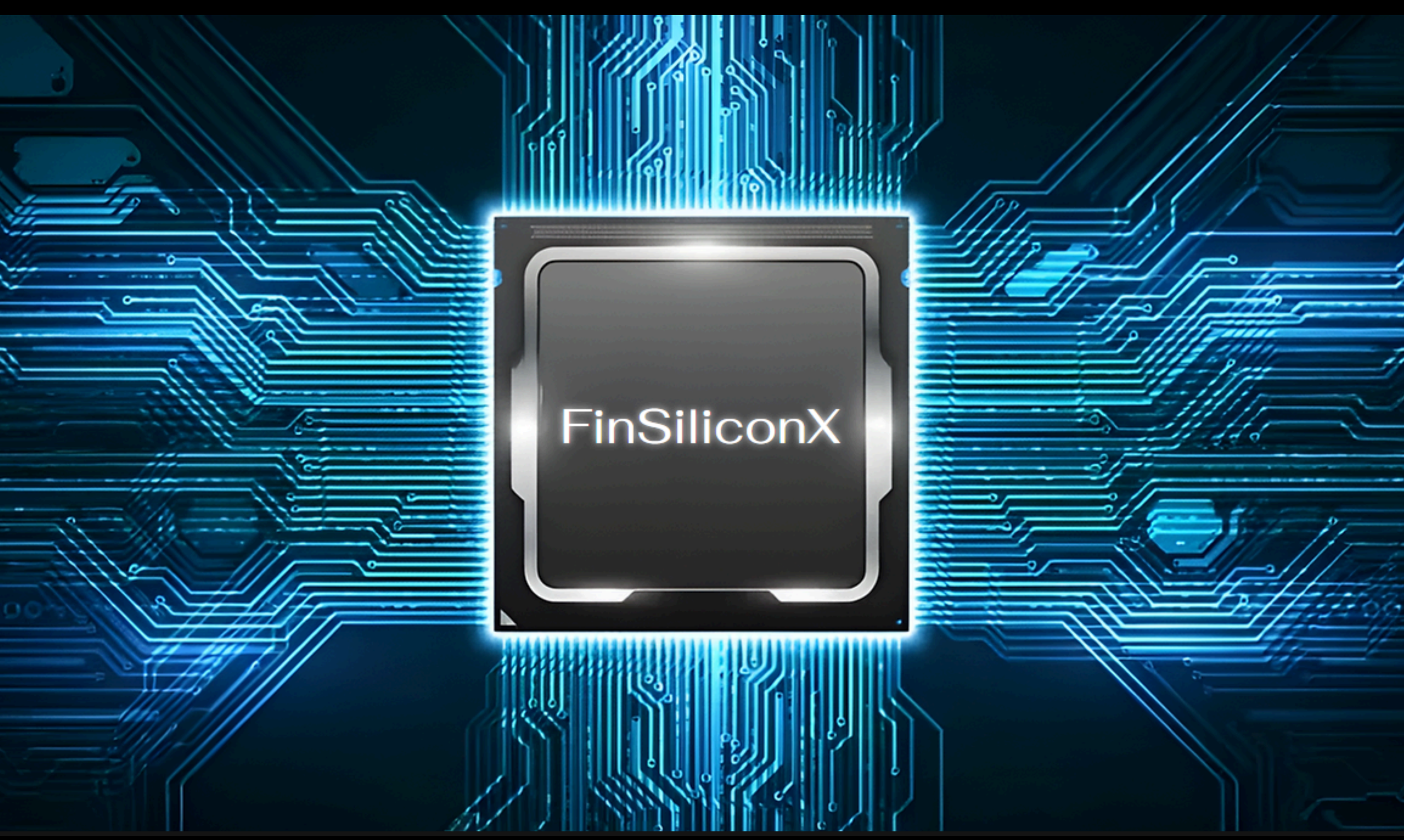


YOUR RELIABLE,HIGH-SPEED & ACCURATE TRADING PARTNER

POWERED BY AI SEMICONDUCTOR

HIGH-FREQUENCY TRADING

INVESTMENT PORTFOLIO

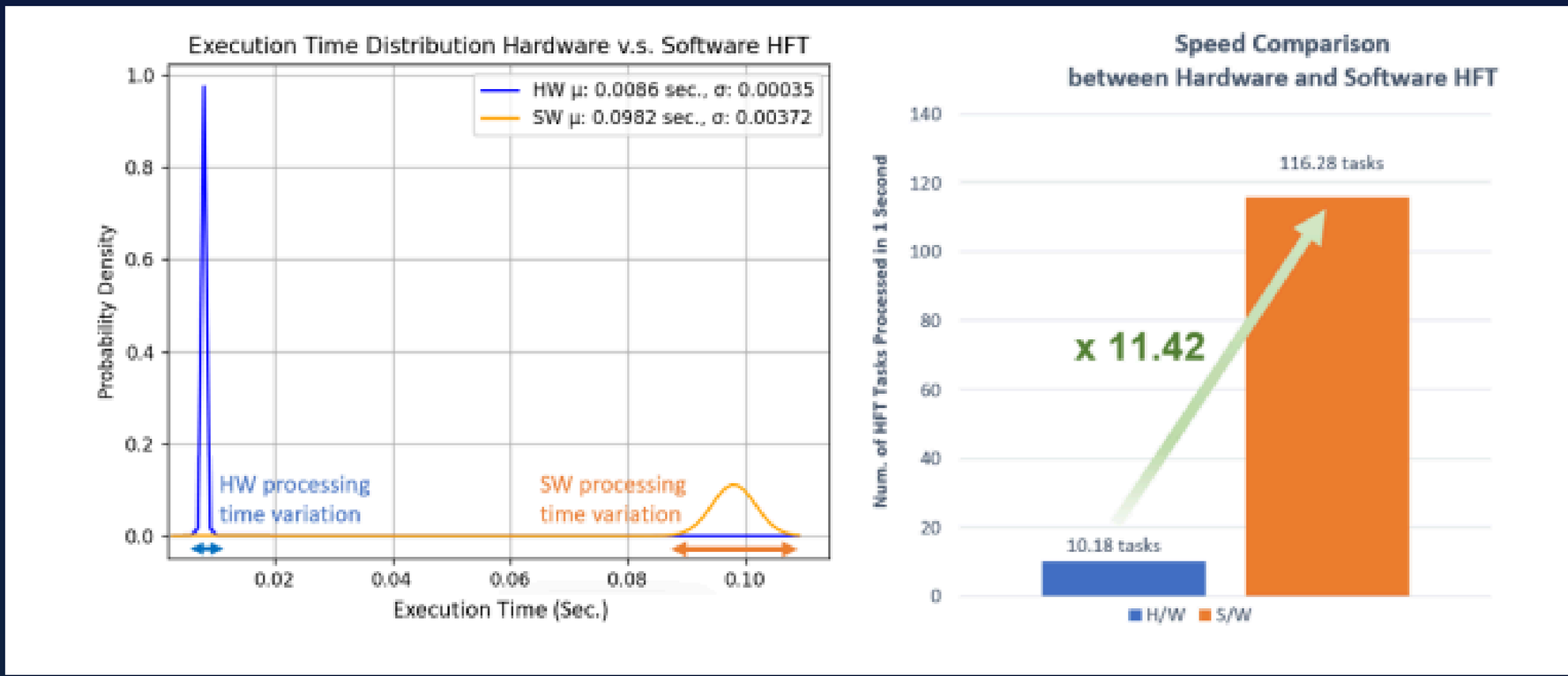
FinSiliconX

FSX100.com

Hardware Acceleration with FPGA

Artificial intelligence (AI) has become essential in financial technology (Fintech), powering applications such as high-frequency stock trading and intelligent portfolio management.

In the industry, linear regression models utilizing Lasso and Ridge Regression are commonly employed to prevent overfitting and improve accuracy. Additionally, FPGA hardware acceleration enables more efficient and rapid training and testing with rolling datasets compared to traditional software-based programming methods.



A hardware-based high-frequency trading (HFT) system using FPGA and a software-based HFT system implemented in Python on a computer each made trading decisions for 20 selected stocks. The results of their performance are compared in the figure above.

The FPGA-based system completed execution in 0.0086 seconds, while the computer-based system took 0.098 seconds, demonstrating nearly a 12-fold speed improvement. Additionally, the standard deviation of the execution time for the FPGA system was significantly lower, at 0.00035 seconds compared to 0.00372 seconds for the computer-based system.

These results highlight the advantages of FPGA-based systems over traditional computer-based systems, including lower latency, higher energy efficiency, and greater parallelism for high-performance computing (HPC), allowing for simultaneous processing of multiple intensive financial data computations.

FSX provides services to high-frequency trading (HFT) institutions by customizing FPGAs for hardware acceleration of trading algorithms, giving them a competitive edge in the financial world where every millisecond matters. This customization enhances efficiency, reduces execution time, and lowers energy consumption compared to software-based HFT trading systems. These FPGA systems integrate well with tensor-based AI trading systems and enhance the performance of Fintech tools for investment portfolios and digital asset management, creating new opportunities for hardware acceleration in AI-powered Fintech applications.

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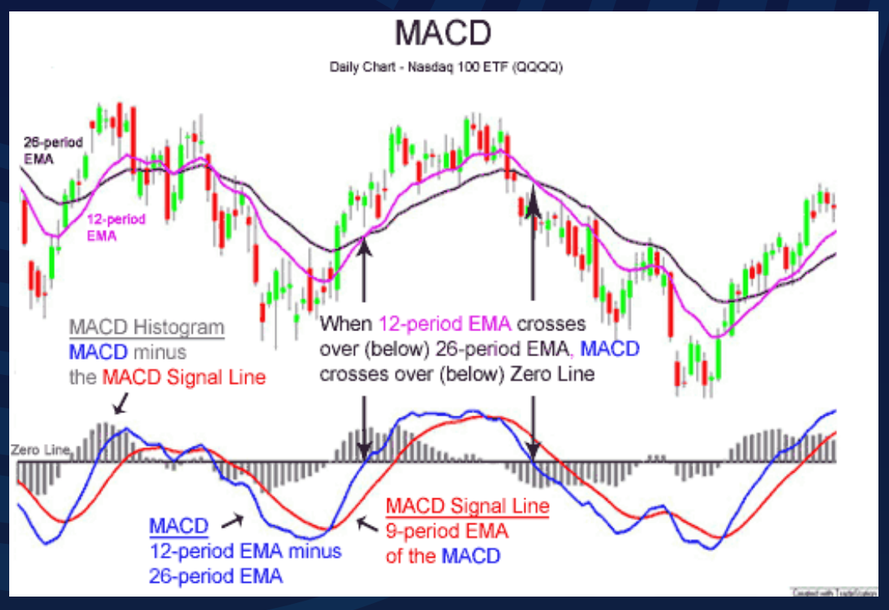
Solution 1 : Ultra-Fast AI-Computing for Investment Porfolio

Computation Time per stock

Computer : 15 mins vs

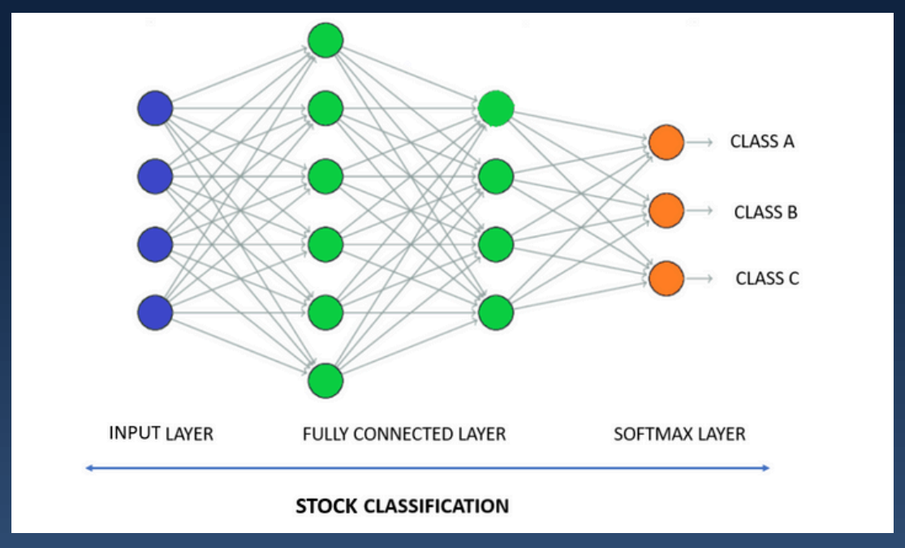
FSX-FPGA : 3 mins vs

FSX-IC : 1 min

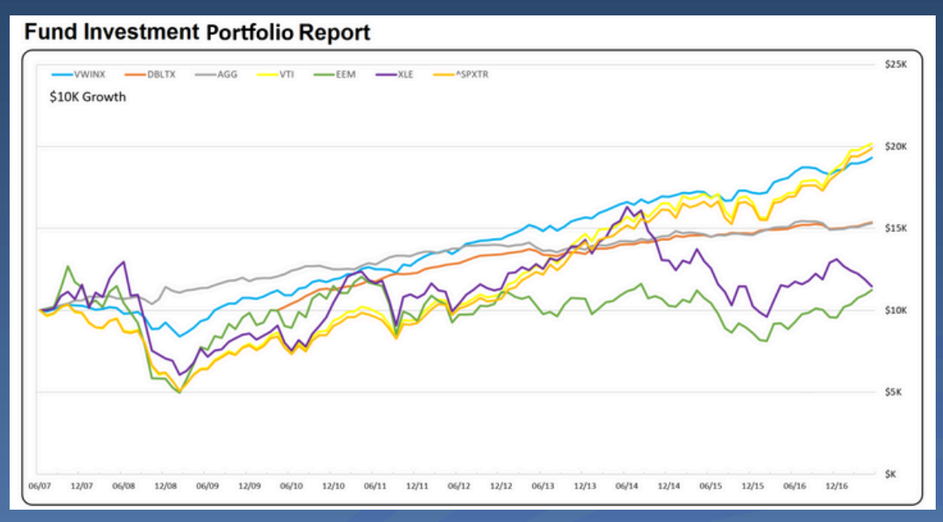


MARKET ANALYSIS

MARKOWITZ'S MODELING



AI TRAINING AND STOCK SELECTION



RISK CATEGORIZATION

FULL RISK MANAGEMENT REPORT

FinSiliconX Solution 2 : High Frequency Trading

	Traditional Solutions	FinSiliconX	
Trading	Software-Based	FPGA-Based	Silicon-Based
Approach	Server/PC/ Notebook	FPGA Circuit Board	Semiconductor IC
Latency	1ms (0.001s)	**1 µs** (0.000,001s)	**1 ns** (0.000,000,001s)
Speed	x1	**~ x300**	**~ x1000**
Flexibility	Reprogram-mable	Reprogram-mable	Non-Reprogram-mable
Power	x40 (200W)	**x8 (50W)**	**x1 (5W)**
Size	Server	iPad	Power-Bank
Support	·High-median power ·Sever/Data Centre ·Notebook/PC	·High-median power ·Sever/Data Centre ·Notebook/PC	·Ultra-Low-power ·USB-C Phones ·Notebook/PC

FPGA vs. Silicon-Based (ASIC)

- **Flexibility**: FPGAs are reprogrammable and adaptable, while ASICs are fixed-function and optimized.
- **Cost**: FPGAs have higher initial costs, ASICs are more economical in large volumes.
- **Performance**: ASICs generally outperform FPGAs in task-specific applications.

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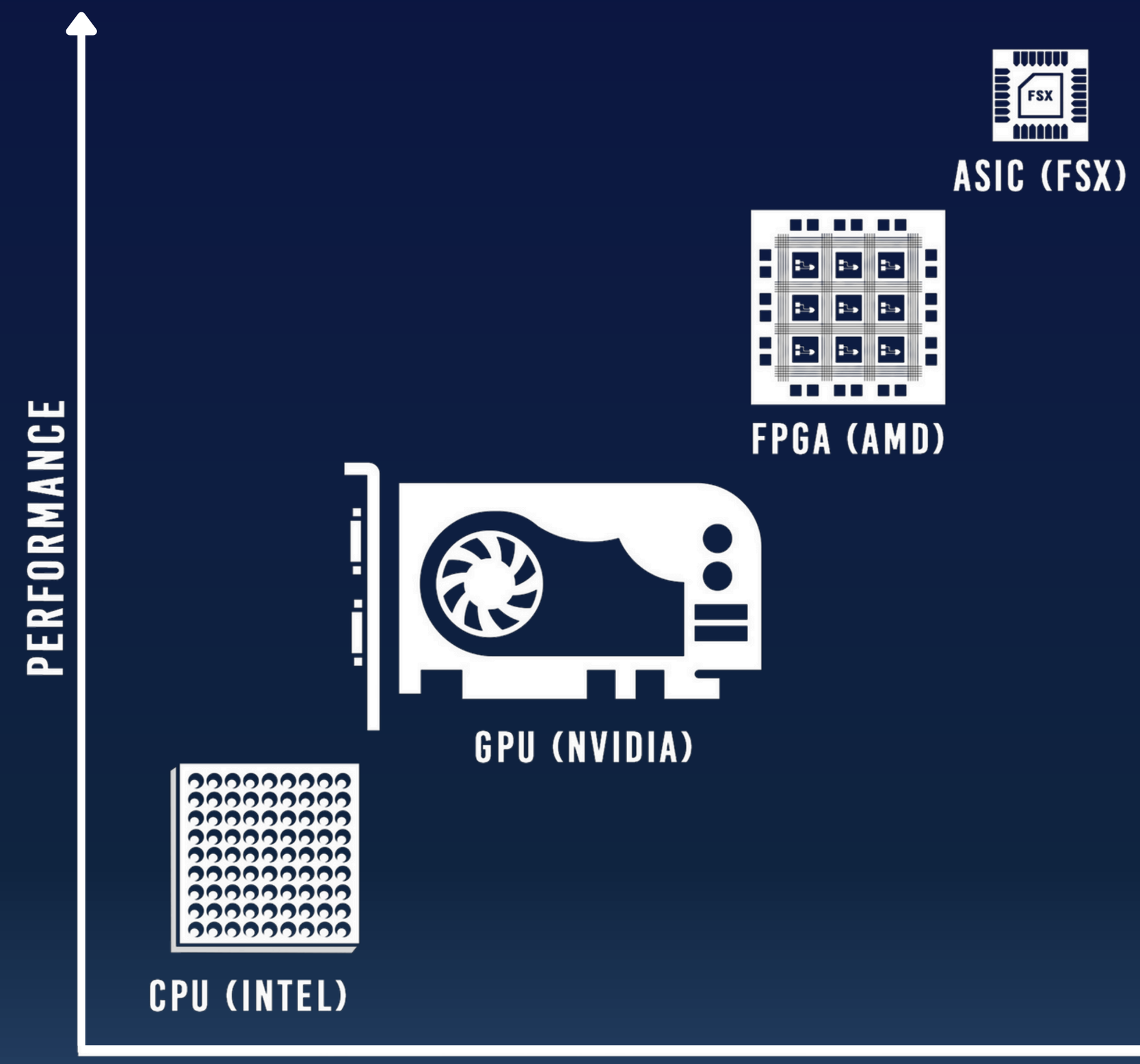
EXTRA PERFORMANCE POWER EFFICIENCY

FSX'S SOLUTION



Optimized for financial strategy

Minimized power consumption

Based on your computing needs

High initial cost with long-term saving

UNLOCK THE POWER OF AI HARDWARE ACCELERATION IN FINTECH