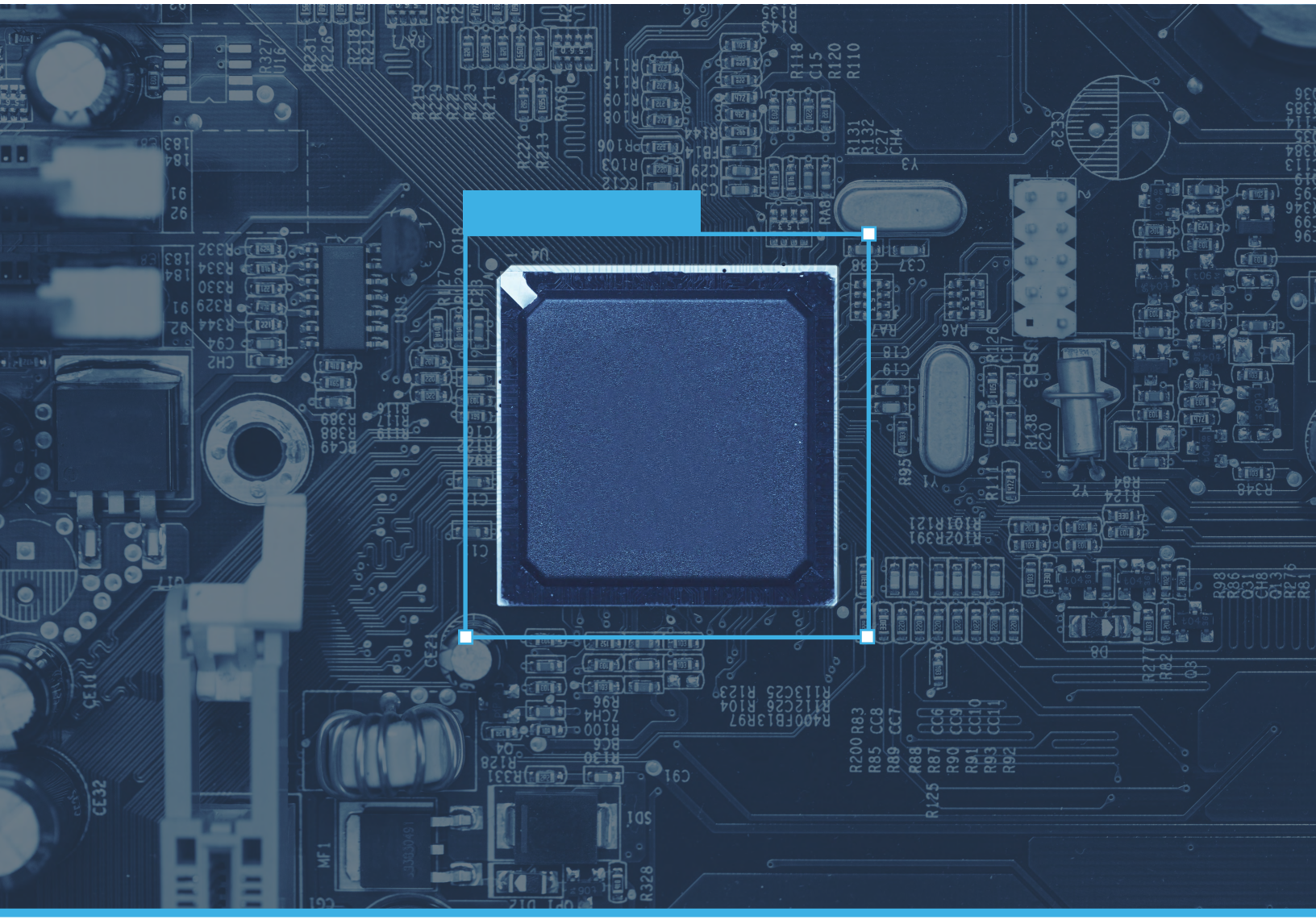
Averroes.ai Enhances Performance and Data Security with On-Premises AI Solutions



AVERROES EXXACT

Contents

AVERROES	3
The Challenge: Balancing Power and Privacy	3
Enter Exxact Server Clusters	4
The Power of On-premises AI	5
Looking to the Future	6
Conclusion	6

AVERROES

Defects down. Efficiency up. Data secure.

These aren't just goals in semiconductor manufacturing—they're necessities. But achieving all three? That's the holy grail.

Averroes.ai is achieving just this with its on-premises AI solution. By leveraging Exxact's cutting-edge hardware, they're solving age-old problems in semiconductor manufacturing.

Key Notes

- Averroes.ai develops powerful on-premises AI solutions for semiconductor manufacturing by utilizing Exxact's NVIDIA GPU-equipped cluster solutions.
- On-premises setup ensures data privacy while enabling real-time processing and inference.

The Challenge: Balancing Power and Privacy

In semiconductor manufacturing, two factors reign supreme: computational power and data security.

As **Averroes.ai** developed its AI-driven visual inspection tools, it faced a challenge. How could it harness the immense processing capabilities required for its deep learning models while ensuring the utmost privacy and security for its clients' sensitive data?

The answer lies in building powerful on-premises solutions.

By keeping data and computational processes on-site, they could offer their clients the best of both worlds: cutting-edge AI capabilities and ironclad data protection.

©2024 Exxact Corporation

Introducing Exxact Server Clusters

Averroes.ai has built private systems using **Exxact server clusters**, creating robust on-premises solutions that leverage NVIDIA GPUs for data processing and inference.

Their decision to leverage Exxact's technology for their hardware needs is well-founded. Exxact is an **NVIDIA Elite Partner** named the 2024 NPN Solution Integration **Partner of the Year** for its commitment and expertise in providing end-to-end NVIDIA AI and high-performance computing solutions across multiple industries.

This cluster allows them to:

1. **Process massive datasets:** Semiconductor manufacturing generates enormous amounts of data. Exxact's server clusters give Averroes.ai's visual inspection system the horsepower to handle this data volume efficiently.

2. **Run complex AI models:** Averroes.ai's deep learning engine requires significant computational resources. The GPUs in Exxact's servers provide the necessary muscle to train and run their sophisticated AI models.

3. **Perform real-time inference:** Speed is crucial in semiconductor manufacturing. The on-premises setup enables Averroes.ai to perform rapid inferences, allowing for quick decision-making and process optimization.

4. **Ensure data privacy:** By keeping all processing on-site, Averroes.ai guarantees that their clients' sensitive information never leaves the premises, addressing critical security concerns.

©2024 Exxact Corporation

The Power of On-premises AI

The benefits of Averroes.ai's Exxact-powered on-premises solution extend far beyond raw computational capability. Here's how it's transforming its approach to semiconductor inspection:

Faster model development

Traditional inspection tools can take months to develop. With Exxact server clusters, Averroes.ai can auto-generate deep learning models within hours, dramatically accelerating the development cycle.

Reduced latency

By processing data on-site, Averroes.ai eliminates the delays associated with cloud-based solutions, enabling near-instantaneous responses to manufacturing conditions.

Continuous learning

Unlike static traditional tools, Averroes.ai's AI models can continuously learn and adapt. The on-premises infrastructure allows for ongoing model refinement without compromising data security.

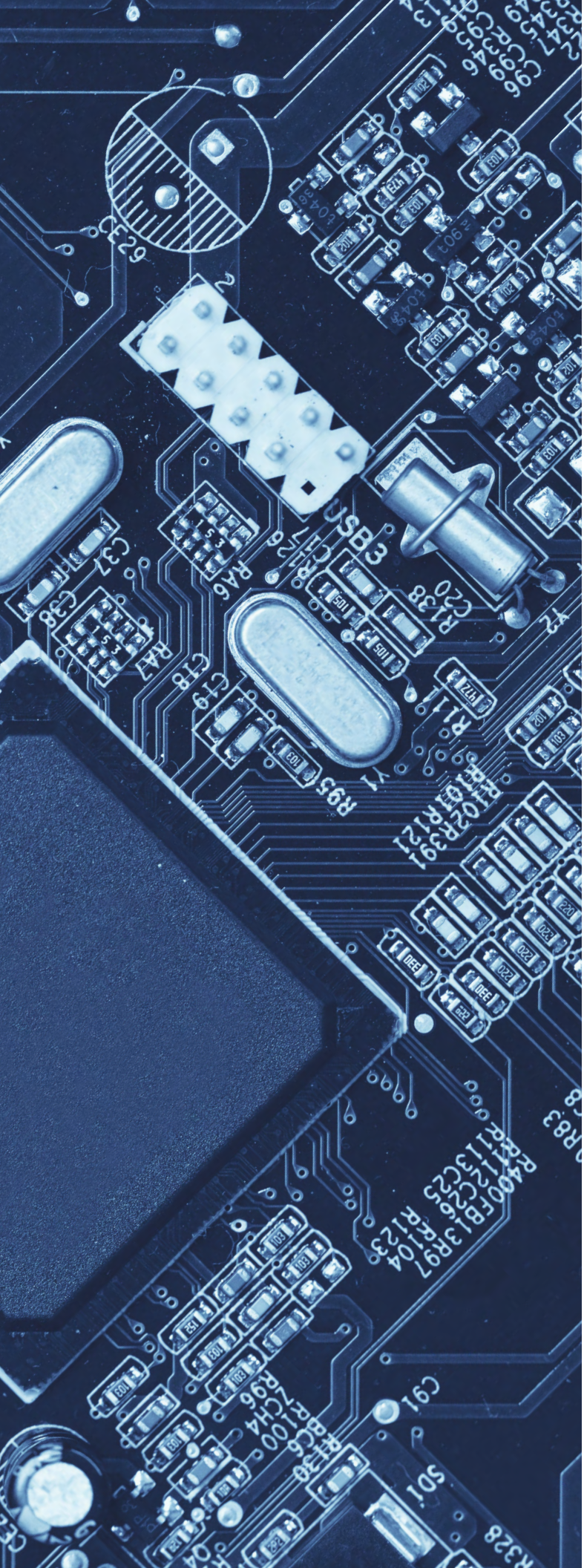
Customization

Every semiconductor manufacturer has unique needs. The on-premises setup allows Averroes.ai to tailor their AI solutions to each client's specific requirements without the limitations of a one-size-fits-all cloud platform.

Scalability

As their clients' needs grow, Averroes.ai's on-premises solution can easily scale. Exxact's modular approach to server clusters means they can add computational power as needed.

©2024 Exxact Corporation



Looking to the Future

As the semiconductor industry continues to evolve, the demand for more powerful, efficient, and secure AI solutions will only grow.

Averroes.ai's innovative approach, combining their advanced deep learning models with high-performance on-premises hardware like Exxact's server clusters, positions them at the cutting edge of this trend.

This enables Averroes.ai to meet the challenges of tomorrow's semiconductor manufacturing needs, offering solutions that balance computational power with data security and privacy concerns.

Conclusion

By utilizing Exxact's GPU-equipped server clusters, Averroes.ai has created an infrastructure that enables processing massive datasets, running complex AI models, and real-time inference - all while ensuring that sensitive client data remains securely on-site.

As the semiconductor industry advances, Averroes.ai's innovative combination of advanced deep learning models and high-performance on-premises hardware positions them at the forefront of AI-driven manufacturing solutions.

By balancing computational power with data security and privacy concerns, Averroes.ai is well-equipped to meet the evolving challenges of semiconductor manufacturing, paving the way for more efficient, secure, and intelligent production processes in the future.