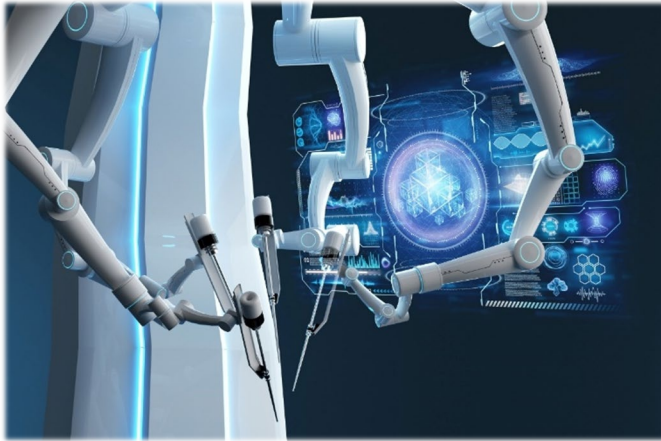


Robotic Spine Surgery



Utilizing advanced AI and machine vision, robotic spine surgery aims to enhance the precision and effectiveness of spinal treatments. This technology leverages edge AI to optimize surgical procedures, ensuring targeted and minimally invasive interventions that significantly reduce recovery times and improve patient outcomes.

Solution

- Portwell's **NURO-823E** edge AI system equipped with an NVIDIA RTX™ A6000 GPU card provides robust computational power for AI algorithms and robotics control
- Providing real-time data processing and complex modeling capabilities, which are essential for precise robotic movements during spine surgery
- Delivering greater effectiveness on fine-tuning AI model by facilitating training with specialized datasets directly aligned with the specific requirements of spine surgery, as requested by the customer
- Local data processing by edge computing safeguards sensitive patient information, enhancing privacy and security
- High-speed processing of imaging and sensor data plays a crucial role in enabling real-time adjustments during surgical interventions

Customer Benefits

- Achieves increased surgical accuracy by providing more precise outcomes in medical diagnostics and treatments compared to cloud-based AI systems, which utilize more generic data during their training
- Enables enhanced diagnosis and decision-making through AI-driven analysis of medical imaging, facilitating early identification of subtle abnormalities and irregularities
- Improves patient outcomes by enabling clinicians to make quicker and more informed decisions through real-time data analysis from medical devices
- Operates effectively in healthcare settings with limited or no internet access, minimizing reliance on network connectivity and ensuring the delivery of medical services in remote or emergency situations
- Reduces operational costs by decreasing dependence on cloud computing resources for data transfer and processing, thereby enhancing data security and privacy