



Mini-ITX
SD103-Q170

Micro-ATX
CS330-H310

DFI has played a key role in assisting a leading U.S. company in the development of X-ray and Bone Density Scan equipment.

Key Info

- The market size of women's health industry is expected to reach about 63 billion dollars by 2030.
- The crucial factors have enabled DFI to establish a long-term partnership with a leading U.S. company specializing in women's health.
- To seize opportunities in the smart health industry, DFI is prepared with both technical capabilities and a range of products.

Industry: Medical

Application: X-ray Imaging system and DXA system for Bone Density Scan

Solution: SD103-Q170 and CS330-H310

The medical industry is a valuable yet conservative market, attracting numerous well-known companies in recent years. DFI, a global leading company in embedded systems and Industrial PCs, stands out with high-quality, long-life cycle products, and customized technologies. DFI has not only been actively involved in the medical industry through long-term partnerships with distributors but has also established consolidated relationships with global-level companies as a vendor.

A world-leading US company, listed on NASDAQ and dedicated to designing premium diagnostics products, medical imaging systems, and surgical products, has utilized DFI's mini-ITX motherboard SD103-Q170 and micro-ATX motherboard to develop an X-Ray imaging system and a DXA system for Bone Density Scan equipment.

Why is the medical industry still hesitant to undergo transformation?

Every task is closely tied to the lives of human beings

Many reports on the women's health industry show a positive outlook, highlighting its significant potential for development. According to the report from the global research institute Grand View Research, the market size for women's health is projected to reach 63 billion dollars by 2030, with a Compound Annual Growth Rate (CAGR) of 5.4% from 2023 to 2030. On the other hand, the report also highlights that the global population of people over 50 years old is expected to increase with a CAGR of 6.7% from 2023 to 2030, and this age group exhibits the highest growth rate.

Despite the industry's promising forecast, entering the field proves challenging for companies due to the profound impact each decision carries in the medical sector, closely intertwined with human lives. Compared to the consumer electronics industry, the women's health sector prioritizes

specific device features, such as stability and life-cycle, over pursuing the newest devices using cutting-edge technologies. Furthermore, the verification process is more rigorous than that of the consumer electronics industry.

The US partner also upholds high standards in checking components provided by vendors. Specifically, for the X-ray imaging system, they seek a long lifecycle customized solution. Moreover, facing limitations in R&D workforce, they are actively seeking companies that can provide strong technical support.

DFI has not only been focusing on Industrial PC and the medical industry for many years but has also continuously strengthened its R&D capabilities to build high-quality products. Furthermore, the defective rate of DFI's products is lower than 1,000, and the average product life cycle is at least 15 years. Thanks to these advantages, DFI, in collaboration with distributors, has surpassed competitors to become a motherboard vendor for the US partner.

SD103-Q170



CS330-H310





DFI's Competitive Edge: Customized and Advanced Products

To rapidly generate diagnostic results and display results in real-time, X-ray imaging systems are typically equipped with at least two monitors. In response to this requirement, the customer has integrated the SD-Q170 into their equipment. The SD-Q170 is equipped with three types of display ports—LVDS, DVI-I, and HDMI—allowing it to drive three monitors simultaneously.

Additionally, the SD170-Q170 is integrated with the Q170 chipset, making it compatible with 6th or 7th generation Intel® Core™ i processors. It supports 2 SO-DIMM DDR4 modules up to 32GB. The system also includes internal expansion slots like PCIe, providing users with the flexibility to modify hardware according to their goals, whether for cost-effectiveness or versatility.

The structure of the DXA system for Bone Density Scan is complex. It not only needs to diagnose, generate, and display results rapidly but also requires connectivity with various devices through communication interfaces.

To meet these communication requirements, the CS330-H310 used in the DXA system is equipped with various I/O options, including 2 Ethernet ports, 1 COM Port, 4 USB 3.1, and 2 USB 2.0. Additionally, it supports display ports for VGA, DVI-I, and DP++. Furthermore, it features expansion slots to enhance product functionality, comprising 1 PCIe Gen 3 x16, 1 PCIe Gen2 x4, and 2 PCI slots.

In this project, the US partner is truly impressed by the high quality and flexibility of DFI's products, as well as their ample capability in resolving technical issues during

development. Based on this outstanding experience, they have decided to establish a long-term partnership with DFI. Currently, the industry is transitioning into the era of AIoT, and end customers are actively seeking high-efficiency solutions for diagnostic purposes. In preparation for the future, the partner is collaborating closely with DFI to develop new equipment, utilizing the ADS/RPS630, a high-performance ATX motherboard featuring 12th/13th Intel® Core™ i processors, and the micro ATX motherboard ADS/RPS310.

Future Plan: Striving to Deliver High-Quality Products Based on Customer Requests

Nowadays, the issue of declining birth rates has become a serious global concern, and it's evident that nearly every country will have to grapple with the challenge of Long-Term Care. Companies are striving to offer solutions, such as expediting the development of smart health applications for easy accessibility by everyone. Regarding the future of the medical industry, there is a generally optimistic outlook shared by global research institutes. Research Reports World, a global research institute, anticipates the smart health market to be propelled by transformative elements like telemedicine and digital health. They project the market size to reach nearly 600 billion dollars by 2028, exhibiting a CAGR of 15.4% from 2022 to 2028.

Drawing upon years of experience in the medical industry, DFI is committed to not only continuously enhancing RD capabilities to create the finest products but also collaborating with ecosystem partners to deliver high-quality, high-flexibility, and high-performance smart health total solutions.



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.

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