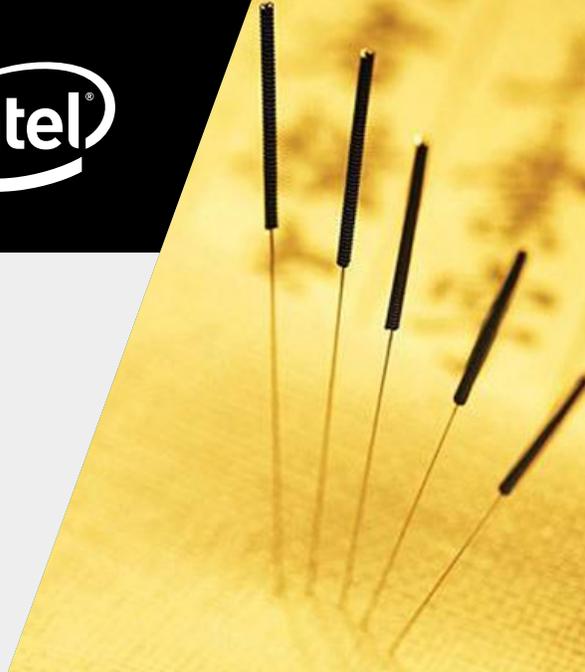


DIGITAL TRANSFORMATION IN TRADITIONAL CHINESE MEDICINE

Beijing Physicare Science and Technology creates an intelligent platform to diagnose patients within 80 seconds



Healthcare

China

Business needs

Beijing Physicare Science and Technology wanted to create a platform for its digitalized traditional Chinese medicine project. The platform was to support analysis of the meridian system, the pathway in our bodies through which our life-energy flows. It would look at internal organs, identify which of the nine constitution types in Chinese medicine the patient has, raise any disease alerts and make a chronic-disease assessment.

Solutions at a glance

- [OEM Solutions](#)
- [IoT Solutions](#)

Business results

- People's constitution types delivered within 80 seconds
- Clinical assessments validate up to 97.8% of diagnoses
- Recommends healthcare treatments
- Noiseless appliance enhances patient experience
- Supports continued development through sensor integration
- Delivers potential social and economic benefits

Identify constitution type within

80 seconds



Up to **97.8%**

of diagnoses are validated by clinical assessments



As part of China's strategic plan of Healthy China 2030, the country is digitizing traditional Chinese medicine. The demand for medical appliances related to traditional medicine is predicted to grow by up to 16.9 percent over the coming years. As such, the country wants to maximize the quality of its medical appliance manufacturing and drive technical innovation.

To support the transformation, China has listed several goals for traditional medicine practitioners. These include the following:

- The need to standardize diagnosis data and reduce reliance on personal experience and knowledge
- The need to improve the quality of communication with patients and nurses to improve productivity and healthcare quality
- The advantages from combining traditional Chinese medicine with its non-invasive, fast and comprehensive diagnoses, and Western technologies such as blood tests, ultra-audible sound and CT scans
- The need to use examination and diagnosis devices to prevent diseases and improve the general level of the population's health

Identifies constitution type within 80 seconds

Founded in 2004, Beijing Physicare Science and Technology is a high-tech company specializing in the production and servicing of, and the research and development (R&D) for traditional Chinese medicine appliances. Its products include the Meridian Detector, the Palm-Shaped Meridian Detector and the Tongue Watch AI Camera. The company has over a dozen IP/patented products, among which the Meridian Detector is recognized as important in traditional Chinese medicine as CT scans are in Western medicine. The company is a pioneer in technical innovation and digital transformation.

Beijing Physicare introduced Dell Embedded Box PC 5000 to provide computing capability for the Palm-Shaped Meridian Detector. The detector selects areas on the hand that respond to 12 meridian energy flows. It then tests the electric current in the "flow" area and imports the data into Dell Embedded Box PC 5000, which features Intel® Core™ i3 processor technology, 8 gigabytes (GB) of double data rate 4 (DDR4) memory and 128 GB solid-state disks in a compact form factor.

The Palm-Shaped Meridian Detector simulates the clinical analysis that is typical for traditional Chinese medicine. The appliance collates and processes data from a total of 24 sensors—12 on each hand. It then delivers a constitution type within 80 seconds. The report includes the patient's meridian status and internal-organ function. It also includes advice on sleeping, drinking and eating, tea treatment, exercises and recuperation, among other factors.

“We can provide patients with multiple healthcare solutions, as well as intelligent diagnosis without human intervention. We are highly satisfied with Dell Embedded Box PC 5000.”

Xu Yuchen, Product Manager,
Beijing Physicare Science and Technology



Correct diagnosis rate of up to 97.8%

Clinical tests have shown that the Palm-Shaped Meridian Detector boasts an accuracy rate of up to 97.8 percent for alerts about major diseases and illness. By digitalizing meridian analysis and identifying diseases, the Embedded Box PC 5000 helps enable intelligent diagnosis for traditional Chinese medicine. In addition, because Dell Embedded Box PC 5000 is designed without a fan, the Palm-Shaped Meridian Detector is ideal for noise-sensitive doctors' offices and patient experience. Furthermore, it can connect with various sensors to support expansion of Meridian Detector.

Digitizing traditional Chinese medicine

Built on Dell Embedded Box PC 5000, the Palm-Shaped Meridian Detector identifies and classifies patients by the physiological implications. It uses cloud computing with a traditional Chinese medical library connected to report clinical diagnoses and recommend treatments. Xu Yuchen, product manager at Beijing Physicare Science and Technology, says, "Dell Embedded Box PC 5000 is both durable and adaptable. It powers our Palm-Shaped Meridian Detector well. The solution offers great computing capabilities and delivers constitution types within 80 seconds—as well as diagnoses that are 97.8 percent accurate as validated by our clinic practices."

Xu adds, "A complete report is a click away, and contains quantified and qualified meridian, internal organ, vital energy and blood, constitution, and other information. Thus, we can provide patients with multiple healthcare solutions, as well as intelligent diagnoses without human intervention. We are highly satisfied with Dell Embedded Box PC 5000."

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Helping support economic growth

The Palm-Shaped Meridian Detector brings intelligent diagnosis to the next level for traditional Chinese medicine with the computing capability of Dell Embedded Box PC 5000. It is applicable to centers of disease prevention, physical examination, internal medicine, rehabilitation therapy and remote diagnosis. It helps screen and assess potential disease risks, identify human constitution, recommend recuperation solutions, monitor health status, and direct healthcare intervention and health assessment for seniors and people who need healthcare services. What's more, by helping identify health issues early, the Palm-Shaped Meridian Detector will ultimately help healthcare providers lower the need for more expensive treatments that are required when conditions are detected at an advanced stage.



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