Robotic and Embedded Technology in Healthcare

Source: InTouchHealth.com

It might seem like science fiction in comparison to other medical advancements made over the years, but medical robots are now a reality and can actually give routine check-ups to hospital patients with the help of embedded motherboards and medical-grade touch panel PCs. These machines can move freely among patients and hospital staff and go from room to room – checking on patients and providing quick medical assistance.

Created by iRobot Corp and InTouch Health and approved by the FDA, these machines are remote-presence robots that utilize a two-way video screen and medical monitoring equipment when checking on patients – bringing a new level of convenience to the medical industry. These robots can be controlled by Axiomtek's advanced embedded motherboards (3.5-inch, Mini-ITX and Nano-ITX) with high performance CPUs to process information to make a preliminary diagnosis to the patient for fast medical consultation. Axiomtek's Medical touch panel PC products can also be integrated into the robot's design, in order to provide human machine interface control of the robot, display treatment options and even provide video feed contact with real medical professionals. The MPC product line also features anti-microbial housing, which is designed to prevent bacterial invasions that are commonly found in hospitals. This means an easier treatment process for hospitals with long patient lines as well as an alternative use for directly dealing with patients that have dangerous communicable diseases.

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Product Showcase

With customizable features including high performance CPUs, extensive storage capabilities, rich I/O options for expandability, various form factor sizes, projected-capacitive multi-touch screen displays, and multiple safety and medical certifications – Axiomtek's embedded motherboards and MPCs are well suited for a wide range of medical industry applications.

Axiomtek also provides design assistance services to customers looking for complete customization to fit their medical industry project needs. Our design engineering services team members are a group of true experts with years of experience assisting our clients in every facet of their product/network design, development and deployment processes. They can take all your headaches away or work as a part of your existing team to help ease the burden of the design and development processes.

MPC240

• High performance 4th Generation Intel® Core™ i7/i5/i3, Pentium® or Celeron® mobile processors

• 24-inch 1920x1080 LCD display with projected-capacitive 10-point multi-touch screen

• EN60601-1 and CE certifications with ultra slim design and antimicrobial plastic enclosure to prevent bacterial invasion

• Optional built-in UPS battery to prevent unexpected power disruption and prevents data loss

MPC240

• High performance Intel® Celeron® J1900 quad-core processor

• 15.6-inch WXGA 300 nits brightness display with projected capacitive touch or 5-wire flat resistive touch screen

• EN60601-1/CE/FCC class B certifications with antimicrobial plastic enclosure to prevent bacterial invasion

• Rugged IP65 rated front bezel and IPX1 full enclosure for system protection from dust and liquid spillage

MANO500

• LGA1151 Socket for 6th Generation Intel® Core™ i7/i5/i3 Pentium® or Celeron® processors

• Two DDR4-2133 SO-DIMM support max up to 16 GB which allows high memory capacity and high rate data transfer speed

• Intel® HD 530 Graphics provides up to four display interfaces via HDMI, VGA, DisplayPort, and LVDS/Embedded DisplayPort (eDP) for Ultra HD 4K display

• Rich I/O options with two RS-232/422/485 ports, four RS-232 ports, four USB 3.0 ports, six USB 2.0 ports, two Gigabit LAN ports, and eight digital I/O channels
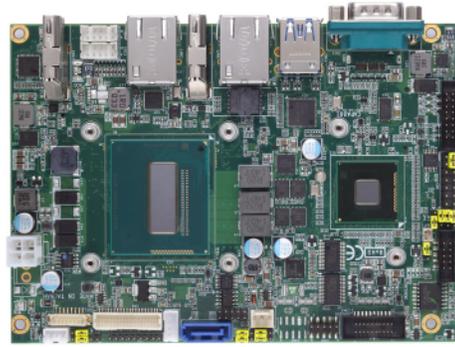
CAPA881

• High performance 4th Generation Intel® Core™ i7/i5/i3 processor with HM86 chipset

• Wide operating temperature range of -20°C to +70°C for operational stability in rugged environments

• Provides one VGA, one LVDS, and two HDMI ports for triple view display and one optional DisplayPort

• Optional Intel® AMT 9.0 supported for remote management, easy maintenance and better security

NANO842

• High performance Intel® Celeron® J1900 quad-core processor or N2807 processor

• Wide operating temperature range of -20°C to +70°C for operational stability in rugged environments

• Multiple display outputs: HDMI, LVDS and VGA with visual experiences enhanced for dual-view support

• Rich I/O options with five USB 2.0 ports, one USB 3.0 port, two Gigabit LAN, one RS-232/422/485, one RS-232, audio, and 8-bit programmed Digital I/O