



## **Robotic and Embedded Technology in Healthcare**

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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 are controlled can be controlled by Axiomtek's advanced embedded motherboards (3.5-inch, Mini-ITX and Nano-ITX form factor) 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 Axiomtek 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.

**Product Showcase:**

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**

The 24" touch medical PC MPC240 is EN60601-1, CE certified to ensure medical operation safety. The Intel® Haswell touchscreen medical panel PC is equipped with a 24-inch Full HD TFT LCD display with brightness of 250 nits. Especially designed for the medical environment. Constructed with an antimicrobial enclosure can prevent any bacterial invasion. The powerful yet super slim 24in medical panel system MPC240 is powered by 4th generation Intel® Core™ processor with DDR3L memory of up to 16 GB. Moreover, the medical touch panel PC supports USB 3.0 ports, Gigabit LAN port and HDMI port to provide end user's multiple choices.

**MPC153-834**

The new MPC153-834 is equipped with a 15.6-inch WXGA TFT LCD display with high brightness of 300nits. Specifically designed for the medical environment, the medical panel PC has IPX1 compliant chassis and IP65/NEMA 4 rated spill and dust-resistant front panel. Moreover, the wide-screen medical touch panel PC is equipped with an isolated COM port to protect equipment from electrical surges and transient voltage spike. Powered by quad-core Intel® Celeron® processor J1900 (codename: Bay Trail), the powerful 15.6-inch MPC153-834 is an ideal choice as a point-of-patient-care EMR computer, enabling health care professionals to access patient records whenever and wherever needed.



### **MANO500**

The MANO500 mini-ITX motherboard is based on the new 14nm 6th generation Intel® Core™ i7/i5/i3 and Pentium® processors in the LGA1151 package (codename: Skylake). Featuring the new Intel® H110 Express chipset with DDR4-2133MHz memory support, this motherboard is built to perform. Its three SATA 6G ports, four USB 3.0 ports, and two RS-232/422/485 ports provide robust storage and I/O options. Users also can increase board functionality with PCIe x16 slot and PCI Express Mini Card slot. The high quality industrial motherboard, MANO500, allows the connection of up to four display interfaces via HDMI, VGA, DisplayPort, and LVDS/ Embedded DisplayPort (eDP), making it an ideal solution for gaming, workstation, digital signage, medical and other smart Industrial IoT applications.



### **MANO300**

The MANO300 mini-ITX motherboard built with the latest Intel® Celeron® N3150 SoC (Braswell) with integrated Intel® Gen 8 graphics supporting up to 4K resolution. Two SO-DIMM sockets are provided to support up to 8GB of DDR3L-1333 memory. The 12V single voltage DC power jack or ATX power makes the power input selection more flexible for different automation and embedded industries. Its friendly fanless cooling system design and compact form factor aimed at space-limited industrial applications.



### **NANO842**

The NANO842 nano-ITX motherboard is designed to support the Intel® Celeron® quad-core J1900 and dual-core N2807 (Bay Trail). A DDR3L-1066/1333 SO-DIMM socket located on the bottom of the board can support up to 8GB system memory. It can handle operating temperatures from -20°C to 70°C, and runs on +12V DC input. This 120 x 120 mm embedded board comes with multiple display outputs: HDMI, LVDS and VGA for dual-view support. The industrial motherboard is an ideal solution aimed at embedded, embedded, medical & healthcare, gaming, and industrial IoT applications.



### **CAPA880**

The CAPA880 3.5" embedded board is designed to support LGA1150 socket for 4th generation Intel® Core™ and Celeron® processors (35W) with the Intel® H81 chipset. The board supports up to 8GB of DDR3 RAM, and offers SATA3 interface, as well as an mSATA slot available on PCI Express Mini Card slot. The compact-size embedded board employs Intel® integrated Gfx graphic engine and provides three display interfaces: HDMI, LVDS (18/24-bit single/dual channels) and VGA. It runs on +12V DC input and offers -20°C to 55°C support. The 146 x 102mm embedded SBC is suitable for IoT/M2M-related, industrial control, robot industry, digital signage, and more.

To learn more about Axiomtek's [medical touch panel PC](#), [embedded board](#), [fanless embedded system](#) and [rBOX DIN-rail embedded controllers](#), contact us at [info@axiomtek.com.tw](mailto:info@axiomtek.com.tw).

## **About Axiomtek Co., Ltd.**

[Axiomtek](#) Co. Ltd. is one of the world's leading designers/manufacturers of PC-based industrial computer products. From our roots as a turnkey systems integrator specializing in data acquisition and control systems, Axiomtek has mirrored the PC evolution in various industries by shifting our focus toward the design and manufacture of

PC-based industrial automation solutions.

Axiomtek Co., Ltd. established in 1990, has more than 60 distributor partners globally. Axiomtek offers Industrial PCs (IPC), Single Board Computers and System on Modules (slot CPU card, small form factor embedded boards & SoM), Fanless & Rugged Embedded System (eBOX and rBOX), Intelligent Transportation System (tBOX), Industrial Firewall Platform, Industrial IoT Gateway Solution, EtherCAT Master Controller, Touch Panel Computers (TPC), Medical PCs (MPC), Human Machine Interface (HMI), Digital Signage and Players (DS), Industrial Network and Network Appliances (NA).

As an associate member of the Intel® Internet of Things Solutions Alliance, [Axiomtek](http://www.axiomtek.com) continuously develops and delivers cutting edge solutions based on the latest Intel® platforms.