

ADVANTECH MEDICAL COMPUTING

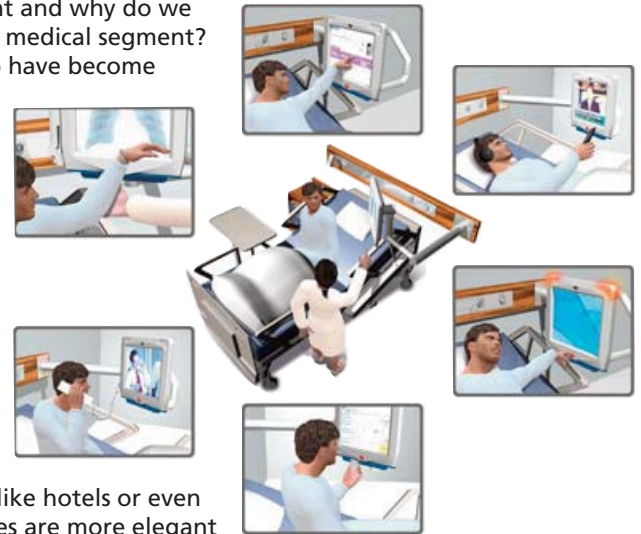


Why Advantech for Patient Infotainment Projects?

- Over ten years experience in medical markets
- Dedicated medical R&D team of engineers
- Strict revision control and design reliability
- Serving the top 10 global medical companies
- Global logistics and RMA services with local support
- Extensive customization capability from board to system level
- UL60601-1/EN60601-1 certified
- ISO 13485 certified
- Vast experience with global healthcare market regulations
- IP65/NEMA4 level sealing
- Longevity and superior warranty/service options
- Multi-national company with worldwide presence

Advantech Medical Computing The Emergence of Patient Infotainment

Why is patient infotainment important and why do we consider it a major opportunity in the medical segment? It is because the internet and the web have become integral parts of our lives, both for work and for entertainment. People use computers to communicate, get the news, watch video, shop, participate in online communities and much more. This has gotten to a point where broadband access is beginning to be seen as a fundamental right rather than a privilege. Why should these essential services not be available in hospitals?



Think about it. Many hospitals are reinventing themselves as less stressful environments that are more like hotels or even homes. Rooms, furniture and amenities are more elegant and more comfortable, but entertainment has rarely advanced beyond a small wall-mounted TV, old magazines, and worn paperbacks. So at a time where people have all the time in the world, there is nothing to entertain them, help them feel connected, and make them feel like home. Providing homelike communications and entertainment amenities will not only be much appreciated by many patients, it will also help in lowering boredom and stress. This is where the concept of Patient Infotainment Terminals comes in.

What Is Patient Infotainment?

Patient infotainment refers to a variety of "bedside terminals" that allow patients to do anything from watching movies and TV, making phone calls, playing games or communicating via the Internet. They can also be used for email, web browsing, accessing hospital intranets, or, if medically advisable, even work. Infotainment terminals may also be used to alert staff, call for help, and operate beds, lighting, curtains, and other installations.

Infotainment terminals may be used not only by patients, but also by medical staff and care providers. The latter may use them to look up electronic patient records, lab results, tests, monitor vital signs and other signals, document observations and changes, and more. To facilitate those functions, PITs may include RFID, digital cameras, smart card readers for data capture and identification purposes, and other peripherals and sensors.

What this means is that a single integrated solution can provide digital entertainment, clinical services, as well as communication to the point of care.



ADVANTECH PATIENT INFOTAINMENT



Patient Infotainment—Exploring New Revenue Streams

In our private and business lives we have become used to paying for a variety of electronic and information services such as cellphone/smartphone voice/data; internet broadband access; WiFi hotspots; cable, satellite or fiberoptics TV; DVD and Blu-ray disc rentals; downloadable content; as well as pay-per-view and premium content. Airports, airlines, hotels and other venues and industries have been offering infotainment products and services for years, and they are using them to increase customer satisfaction as well as to create new revenue streams. Hospitals and other healthcare facilities are different, of course, but there is no reason why specially designed infotainment products and services could not be used to improve the patient experience as well as streamline and improve patient care in the process. This is a largely unexplored win-win situation for all involved—hospitals, patients and the VARs, contractors and system integrators who will find in hospital and patient infotainment a very attractive growth industry.

Benefits to Patient:

- Receive personalized entertainment
- Have access to news, shows, movies
- Communication via IM, chat, Skype, etc.
- Texting/tweeting
- Social networks
- Lookup/education/research
- Eliminate needless boredom
- Remain productive and on top of things
- Remain accessible to friends and family
- Access to medical information and charts
- Quick way to get help and assistance

Benefits to Hospital:

- Increased customer satisfaction
- Patient empowerment
- Competitive/marketing advantage
- Patient record mandate
- Diagnostic assistance
- Streamlined patient care
- Improved communication
- Possible revenue stream: Access fees
- Possible revenue stream: Rentals
- Possible revenue stream: Pay-Per-View
- Possible revenue stream: Premium Content

Already popular in Europe and other parts of the world, patient infotainment represents a new market in the United States, and one with tremendous potential. Patient infotainment will create a whole new patient care experience through all-in-one interactive terminals that provide entertainment, information, medical care aid, and communications.

Patient Infotainment Terminals are ultra-flexible bedside portals to watch TV and listen to radio, communicate through IP phone and instant messaging, surf intranets, play games and more. They can also provide e-learning for younger patients as well as serve as professional diagnostic aids for health care staff to retrieve electronic patient records, access medical resource and drug libraries right at the bedside, and facilitate point-of-care medical information and lookup. The application opportunities are endless.

Patient Infotainment Application Potential:

- Hospital services/directions
- Menus/special order
- Promotional videos
- Internet access
- Digital phone
- Intranet access
- Movies-on-demand
- Bed administration
- Accounts and billing
- HIS reporting/surveys
- Electronic drug charting
- Educational programming
- Nursing observation assistant
- Electronic patient records (EPR)
- Computerized physician/provider order entry (CPOE)



Patient Infotainment Products

PIT-1702 Patient Infotainment Terminal

The PIT-1702 is an all-in-one bedside terminal that makes hospital stays easier by providing multimedia entertainment and communication choices, and also benefits medical staff by providing secure access to electronic patient records as well as facilitating professional diagnostic assistance. The product was designed to improve the hospital patient care environment by enabling education, communication, access to clinical solutions and digital entertainment—all at the bedside.



Running Microsoft Windows XP Embedded or Linux on Intel Celeron M or Core 2 Duo processors, the PIT-1702 has a 17-inch touchscreen with 1280 x 1024 pixel resolution, three USB ports, an integrated mini-PCI WiFi module, an earphone jack, a microphone and an integrated CMOS camera. An optional digital video TV tuner, wired remote control, and phone handset allow the fanless PIT-1702 to be configured for numerous entertainment, diagnostic, information and communications applications including video phone service. RFID and a Smart Card reader facilitate security and quick identification checks. Prominent LED indicator lights and a nurse call button help alert hospital staff. Featuring a slim, clean, space-saving design as well as IP65 front panel sealing, a drip-proof housing, and VESA-compliant mounting methods, the easy-to-clean and disinfect PIT-1702 is uniquely suited for hospital environments.

PIT-1501W Patient Infotainment Terminal

The PIT-1501W is a state-of-the-art multi-function patient infotainment terminal with a 16:9 aspect ratio wide-format display that provides HDTV-standard 1366 x 768 pixel resolution and therefore allows optimal viewing of high definition television programming with the optional digital TV tuner, as well as video and movies that are all moving towards the 16:9 standard. The device is powered by low-voltage, extremely efficient Intel Atom Z5xx series processors, enabling silent, fanless operation and very low power consumption. Weighing less than ten pounds even with the optional handset, and being just 2.5 inches thick, the compact PIT-1501W can be used and mounted just about anywhere. Based on the Windows XP Embedded OS platform or Linux, the terminal can be configured to provide a wide variety of entertainment, diagnostic, information and communications services. Like all Advantech patient infotainment systems, the camera-equipped PIT-1501W is rugged, well sealed, easy to clean and disinfect, and offers a variety of safety and security features such as LED indicator lights and nurse call button as well as RFID and Smart Card readers.



MICA-101 Mobile Clinical Assistant

Based on Intel's MCA reference architecture, Advantech's MICA-101 Mobile Clinical Assistant is a small and handy tablet computer based on the efficient Intel Atom processor. Its low heat dissipation facilitates a sealed, fanless design that provides a competitive advantage over fan-based designs that are louder, less reliable, and more difficult to disinfect. The MICA-101 features easy connectivity via WiFi, Bluetooth and optional 3.5G mobile communication. It has a dual digitizer for both touch and pen operation, as well as an integrated camera with illuminator, RFID reader, and optional barcode scanner, fingerprint reader, and webcam. Available with a choice of docking stations, the MICA-101 is primarily designed as a terminal for mobile clinical information systems, but can also be used for patient educational, informational and entertainment purposes. Weighing barely more than three pounds, the application potential of this modern multi-function tablet is almost unlimited.



PATIENT INFOTAINMENT TERMINAL CHECKLIST

- ✓ Cost-effective
- ✓ Touch-screen
- ✓ Remote control
- ✓ RFID
- ✓ Smart Card
- ✓ Durable
- ✓ Easy to clean and disinfect
- ✓ Flexible mounting solutions
- ✓ Quiet/silent operation
- ✓ Low heat dissipation
- ✓ Flexible communications
- ✓ Easily updateable
- ✓ Digital TV Tuner
- ✓ Flexible audio options
- ✓ UL60601-1 certified
- ✓ EN60601-1 certified
- ✓ IPX1 and IP65/NEMA4 certified



ADVANTECH PATIENT INFOTAINMENT

Application Examples

When St. Olav Hospital in Trondheim, Norway, decided to reinvent itself from the ground up, they embarked on the design of a fully patient-centric hospital that would have “secure information available to the right person at the right time.”

Another Norwegian hospital, the New Ahus, also rebuilt, and their vision was to create a “paperless hospital” where all work processes—medical and non-medical—will all be digitized.

An additional requirement of both hospitals was to have “a terminal next to every bed,” a task Advantech tackled with a Norwegian partner and their IMATIS (Integrated Modular Administrative Technical Information System) integrated healthcare software framework.

Thousands of the collaboratively developed bedside terminals, based on the Advantech PIT platform, have now been successfully deployed at St. Olav and New Ahus hospitals.

For more information:

www.advantech.com/medical
ECGInfo@advantech.com
1-800-866-6008

Advantech—Innovation, Customization, Support

Home Healthcare

Patient Infotainment Terminals also have great application potential in home healthcare, both as dedicated bedside terminals and as parts of overall home healthcare plans and systems. Specially configured PITs can provide secure yet easy access to electronic health records, serve as remote patients condition monitoring devices, assist in exercise and rehabilitation programs, and, of course, provide entertainment and information in a durable, patient-friendly enclosure that can be mounted and deployed anywhere.



Customization Services From An Experienced Vendor

New markets, more than any other, benefit from the availability of comprehensive customization services from an experienced vendor. Advantech has been offering medical market solutions for over a decade and is working with the world’s ten largest medical providers. Tailor-made terminals from Advantech facilitate cost-effective, profitable solutions that are quick to market and allow quick response to special market demands. We value product longevity and quality as much as you do, and our technical expertise and comprehensive warranties make for partnerships built on trust.

AdvantechCare

In an era where many vendors simply dropship product from remote locations, and service and support are hard to come by, at Advantech we understand how much you care about your hardware investment. Whether it’s an issue with efficiency, budget control, or after sales support, AdvantechCare Service is here to help with customizable AdvantechCare service packages that can include extended warranty service, Advantech Onsite Service where an engineer will bring repair parts the next day and handle problems onsite at the customer’s appointed place, pickup service of defective units, advanced replacement service, as well as data security, system rescue, upgrade, and technology update services.

Certifications and Certification Services

The switch to electronic patient records presents great opportunities to certified electronic health records product vendors. Advantech patient infotainment terminals are EN 60601-1 and UL 60601-1 certified for electromagnetic radiation prevention, IPX1 and IP65/NEMA4 certified for water and dust resistance, and Advantech is also ISO13485 certified and meets the specific standards for medical computing platforms under existing national regulations. Advantech can also assist in submitting product and supporting documents for FCC, UL, and CE certification and reporting.

