

Primary Media Contact:

Advantech Europe B.V.

Pauline Huang

+31 (0) 40 267 70 84

Pauline.Huang@advantech.eu

Palm-size Fanless System for Medical Nursing Cart

*Smallest Embedded Box PC Saves Power, Space, and Costs***Area: USA****Project:**

Advantech rolled out the world's smallest embedded box PC at the very beginning of 2012. Dubbed the ARK-1120, it features a palm-print size of 133.8 x 43.1 x 94.2 mm (W x H x D) and weighs only 0.8 kg. Small yet impressive, its CPU runs at above-average speed yet with much reduced power consumption. This mini killer product received its first order from a medical cart supplier based in the USA.

This medical cart maker's previous solutions used a laptop bolted to the top of the cart, or a commercial PC placed in the cart cabinet, with a matched monitor on the desk. Both laptops and commercial PCs are space-consuming, however, and difficult to secure to mobile carts, and their product service cycles are of short duration, which meant they had to be replaced every two or three years.

With the small yet powerful embedded box PC ARK-1120 provided by Advantech, this company is now able to offer new nursing carts which save space and power, and, with logistical support from Advantech, the computer devices are guaranteed to have a longer service life cycle, which means overall costs are reduced.

Requirements:

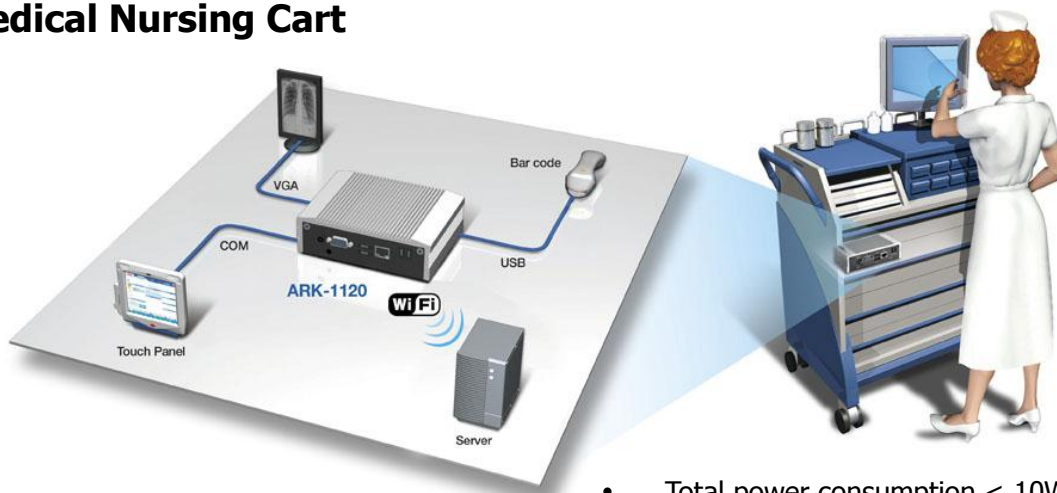
- Small dimensions and light weight
- Low power consumption
- Well-bracketed
- Fanless design
- Wi-Fi module for wireless communication
- Supports touch panel interface

System:

The ARK-1120 can be provided with one of two optional I/O panels. For this medical application, we offer the one with 4 USB and 2 COM ports, and a half-size mini-PCIe expansion slot to connect with a wireless communication module.

The ARK-1120 is bracketed under the cart table, and a connected touch panel is placed on the desktop; nurses and physicians use it to read data and administer their work. With the provided COM ports, the ARK-1120 is connected to medical instruments which are used to measure patients' vital signs. A bar code reader is also connected to the ARK-1120 via USB port; nurses scan codes and read patient data from the server before administering medications, while the latest vital signs of the patients are immediately recorded and transmitted to the server through wireless communications.

Though small in size, this ARK-1120 computer runs on an Intel Atom N455 1.66 GHz CPU, which is more than fast enough for medical cart applications but saves much power. In normal operation, the ARK-1120 consumes 10 watts of electric power, compared with the 100 watts of an average commercial computer. This is particularly important as electric devices on the carts are powered by batteries, and reduced power consumption means prolonged service between battery recharges.

Medical Nursing Cart

- Total power consumption < 10W
- Palm-sized design for space saving

Conclusion:

This mini, power-saving ARK-1120 is particularly suited for nursing cart application as, though the use of mobile carts brings benefits of clinical documentation, nurses understandably find it a nuisance to transport computer gear while making their rounds. The application of this palm-sized computer alleviates the nurses' burden.

Secondly, the fanless design of ARK-1120 is more benignant for bedside supporting; computers with fans, on the other hand, make noises and blow dust and microorganisms which could be detrimental in a healthcare environment.

Last but not least, ARK-1120 is offered at a rather attractive price. With decades of accumulated knowledge and experience in industrial computers, Advantech knows how to strike an excellent balance between CPU performance, hard disk storage requirements, cooling performance, and price. No competitors in our area can achieve this yet.

In addition to medical carts, this ARK-1120 is also suitable for applications in machine tools, factory automation, and remote control for wind turbines at wind farms, thin clients for commercial purposes, and more.

ARK-1120

Ultra Slim and Price-competitive Intel® Atom™ N455 Fanless Embedded Box PC

- Built-in Intel® Atom™ processor N455 1.66 GHz
- Supports 2 COM, 4 USB, 1 GbE and 2.5" SATA HDD
- Low-power-consumption solution. Power consumption < 10W
- One half mini-PCIe socket expansion
- Dimensions (W x H x D): 133.8 x 43.1 x 94.2 mm



About Advantech

Founded in 1983, Advantech is a leader in providing trusted, innovative products, services, and solutions. Advantech offers comprehensive system integration, hardware, software, customer-centric design services, embedded systems, automation products, and global logistics support. We cooperate closely with our partners to help provide complete solutions for a wide array of applications across a diverse range of industries. Our mission is to enable an intelligent planet with Automation and Embedded Computing products and solutions that empower the development of smarter working and living. With Advantech, there is no limit to the applications and innovations our products make possible. (Corporate Website: www.advantech.eu).