Saving Christmas with Warehouse Automation

AXIOMTEK

This holiday season, much like every other holiday season, major online retailers are looking for ways to increase the efficiency of their warehouses in order to fulfill shipping orders before Christmas day. In past years, the month of December meant rushed warehouses and overworked employees struggling to get orders out on time.

However, advancements in automation are starting to catch up with the holiday shopping craze as companies are coming up with new and innovative ways to ship packages out and arrive in time for the holidays, enhancing operational efficiency and, ultimately, customer satisfaction. With an emphasis on efficient fulfillment process, Amazon, the giant online store has invested billions of dollars into robotics. Amazon bought Kiva Systems in 2012 for $775 Million dollars – with a main goal of improving its worldwide order fulfillment. Amazon's unique answer to crowded shipping warehouses that require about an hour and a half to fulfill one order is thousands of small box-like robots. Each robot is capable of picking and moving an estimated 750 pounds of items in order to reduce order fulfillment time to about 15 minutes, making it much easier for their fulfillment team to perform their jobs. Instead of the warehouse workers moving massive pallets of products with slow moving forklifts, these robots scurry around the warehouse like Santa's elves on steroids- bringing the correct products categorized by computer barcodes to the right employee for final packaging so that Christmas presents arrive on time. The company has invested heavily in this area of its operation and it has paid off. Their revenue was reported to have increased by 22% in the same period. These robots are equipped with sensors and are controlled by embedded computers.

System Design Features:

Axiomtek's IPC934-230-FL is perfectly suited to work in the automation industry, as a controller for the robots. The system can support the Intel® Core™ i7/i5/i3 or Celeron® processors for high computing performance, multiple expansion slots, and has a rugged design with a wide operating temperature range of -10°C to +50°C (14°F to +122°F) – making it ideal as a controller in the automation market. The IPC934-230-FL is also IP30-rated with many industrial features including fanless, noiseless operation and a unique thermal solution design and 10V – 30V DC 150W wide voltage range for mission critical environments.

Furthermore, the IPC934-230-FL comes with rich I/O options including two 2.5" SATA HDD, one CFast™ socket, four COM ports (one RS-232/422/485, three RS-232), two USB 3.0 ports, four USB 2.0 ports, dual Gigabit Ethernet, PS/2 ports, one DIO, audio and DVI-I.

Axiomtek has developed our industrial PC systems with an emphasis on rugged, fanless designs, high performance CPUs, and multiple options for expandability to ensure reliability. These features make the IPC product line suitable for many applications in the automation industry.

IPC934-230-FL Key Features:

- High performance 4th Generation Intel® Core™ i7/i5/i3 or Celeron® processor up to 45W
- Supports 4-slot expansion for expandability options
- DC to DC power supply supports 10V - 30V for flexible power options
- Rugged wide operational temperature range of -10°C to +50°C (14°F to + 122°F)