Case Report

noax IPCs used in a confectionary company

Industrial PCs

at Stabinger S.r.l./GmbH

Completely enclosed – IP65
For extreme environments
Simple touch screen operation

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noax industrial PCs control processing machines and optimize production processes in a wholesale confectionary located in Germany.

Quality, quality, quality... that's how Karl Stabinger views his priorities regarding his products. Everything has to be correct from raw materials to processing and, finally, to packaging. The founder and CEO of the Stabinger Confectionary Company used this simple formula to change a small-town bakery to a company which exports its goods to all parts of Europe. In addition to having customers in Italy, Stabinger delivers to retail chains in Germany, Austria and Switzerland. There are also department stores and delicatessen stores in France, the Scandinavian countries, the Benelux states and Ireland which are part of his market.

noax Steel IPC S15

Overview

Customer:
Stabinger S.r.l./GmbH, wholesale confectionary with customers throughout Europe (www.stabinger.it/uk)

noax-Partner:
TopControl; www.topcontrol.it

Requirements:
- IPC use in production lines
- easily accessed by touch
- completely sealed construction
- small dimensions
- resistant to flower dust, water and cleaning materials
- interfaces for diverse peripheral equipment, such as printers
- compatible with Windows XP
- bright and easily legible display
- repair-friendly
- professional support and service
- long lifetime
- maximum operational reliability
- high system availability

Installed noax product: S15 and P15
- noax N8C motherboard
- Intel Pentium M, 1.4 GHz
- 15" TFT display (1,024 x 768)
- safety standard IP65
- resistive touch panel
- completely sealed enclosure

Product uses:
- optimizing operation and processes
- optimizing working times
- control of mixing machines and baking ovens
- display of orders in real time
- automatic label-printing

Superior offer

His "Sweet Sins from Southern Tyrol" are currently being sold by grocery store chains which value superior quality, such as Metro Cash & Carry; they carry brand names, such as Real, Extra and Galleria Kaufhof, Rewe Zentrale and Feinkost Käfer in Munich.
The confection goods are produced in southern Tyrol. The production site is outfitted with state-of-the-art technology, and has machines that can produce 3,800 Ricotta pastries per hour, and at the same time produce about 5,900 feet of Strudelini, which is a type of mini apple strudel. In addition, it has cooling and packaging facilities and a mechanical workshop to maintain their own equipment. Two in-house, food-processing technicians supervise the quality of produced goods as well as purchased raw materials. In regard to the quality of his products, Karl Stabinger makes no compromises.

Although he produces a large quantity of goods, his cakes and pastries still taste as if they had come from a small-town bakery. This is partially due to the consistent use of high-quality, fresh ingredients, and dedicated workers, and also because he uses the most modern food production technology which includes noax industrial panel computers S15 and P15.

Premium model

noax tough IPCs, together with other hardware components offered by the specialist for system solutions at TopControl, have managed efficient and reliable production processes since November 2006. From 1991, TopControl has made a name for itself in regard to its automation systems, which reaches far beyond the boundaries of southern Tyrol. All components are designed to work together and can therefore ensure optimal functionality. Regarding the software, TopControl reaches back to a vertical branching solution which was


Completely sealed according to IP65. Flower dust does not affect the noax computer.

developed by the system house Eos especially for food production companies. The software architecture at Stabinger consists of the ERP software Microsoft Dynamics NAV and special programs for machine control in the confectionary industry. The main piece of the solution, the standard software Microsoft Dynamics NAV, was adapted to the requirements of the confectionary industry, by expanding a few modules such as recipe management. These programs take over the control, documentation of production orders as well as backtracking, which is required by law.

As soon as an order is entered into the system it appears on the wash down touch screen. The advantage is that the data goes directly into the production rooms. From his waterproof PC, the head of production can determine which orders take priority and can then delegate the necessary equipment and personnel as required. The computers run a module for planning time data acquisition. With that in mind, Karl Stabinger introduced a group premium model at his plant, which rewards those workers who perform their work best.
At the beginning of production, the nema touch panel computer determines whether the combined ingredients in the mixing machines correspond to the recipe. A Bizerba scale determines the respective amounts and passes that information on to the noax waterproof PC. The computer then compares it to the recipe data and if the mixture ratio is not correct, it will immediately inform the production manager.

Compressed air for whipped cream

A tough noax computer controls the composition and consistency of the whipped cream mixture. The cream is whipped with compressed air. In contrast to traditional processing with an electric blender or a whisk, which requires about 15 minutes, compressed air only takes about four minutes and the taste is not affected. Even here, production times are being reduced by modern food technology.

A noax heat-resistant PC monitors baking times at the ovens. Since baking requires a sensitive touch, cake dough has to be baked exactly right; not too long or too short. In addition, certain products have to be baked immediately after mixing. Only this way can optimal quality be assured.

A module is part of the software solution, which determines the ideal combination of oven-use and optimal baking time for each respective product. When cakes, tarts, or strudel are baked, filled and decorated, they have to be packaged in order to seal in the aroma and allow for safe transport. Karl Stabinger has outfitted a separate room with automatic packaging machines, where noax IPCs take over essential tasks such as printing labels or keeping track of packaging units.

High-tech in the bakery: a noax IPC directly next to the oven controls baking times.

A worker acquires data by a touch screen.

Metal detector

Before the cakes go on their final journey, they have to pass by a metal detector which determines whether, despite intensive controls, a screw or other metallic object is present. This is also part of quality assurance, making sure that the customer will receive a perfect product. After the final check, the baked goods are packaged for transport and sale.

A noax mobile computer is also located at the packaging machines, which is responsible for printing the labels. It shows which label is printed for which product and for which customer. Since Stabinger is internationally active, the labels are produced in the customer's respective languages. In addition to the name of the product, a description of the product and the weight, the label also contains the EAN CODE (European article numbering), with its corresponding barcode. A photoelectric beam keeps track of the packaging units, until each respective order is completed. Once that is done, the cakes, tarts and strudel can be placed on palettes and loaded on the trucks.

Stabinger has optimized his order processing and production to such an extent that an order which is received before 6:00 PM, will be shipped on the following day before 2:00 PM. In this way, his customers are assured of always receiving the freshest goods.

Conscientious cleanliness

The completely sealed touch screen PCs, which automate the processes at Karl Stabinger's company, were designed by noax, with emphasis on the particular hygiene requirements of the food production industry. The units have a smooth stainless steel enclosure without ridges, so that no germs can collect. Most important, they are completely sealed according to safety standard

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Pure temptation – Stabinger's delicious pastries.

IP65, which means that neither dust nor humidity can enter the computer and cause corrosion or allow shorts to take place. In regard to Stabinger, this means that the computers have to be protected from flour dust, water, cleaning materials and grease during production.

Conscientious cleanliness is part of the quality philosophy of the entrepreneur: "Fundamentally, we do not add any preservatives to our products. Our preservative measures are hygiene, if you can put it that way. This means that the installations, including the noax touch screen PCs, are regularly hosed down with water and cleaning materials under high pressure. This does not affect the computers at all, due to their completely sealed construction. In addition, all connectors and connections are safeguarded by the use of high-stress seals, preventing water, chemical cleaning materials, acids or brine from affecting them.

All components in a noax waterproof computer, including the hard drive and CPU are rigidly attached. In addition, noax fundamentally does not use plug connectors, which would normally be used in an office PC, and can also be found in some so-called industrialized PCs. An industrialized PC is a PC with a relatively stable enclosure. However, inside the normal standard components are mostly plugged into the motherboard. This means that they can come loose during shock or vibration and bring the computer to a standstill. If such computers control expensive installations or production machines, a breakdown leads to immense costs. Production would no longer have access to the goods management system and delivery deadlines could not be met, which is particularly critical for "just-in-time" deliveries. In regard to its customers, a company with these kinds of information technology problems will quickly lose its reliability and endanger its very existence. Reliability of automation solutions is the A and O in production. In regard to reliability, noax guarantees its customers not only the best processing on the market, but also five years of on-location support and an additional five years of passive support.

Suitable for the industry

From the beginning, it was important for the noax designers that the total concept of their computers be directed at environmental conditions in industrial production. They know that extreme high temperature variations, the use of cleaning materials and other chemicals, permanent vibration or heavy shocks such as when a forklift rams a computer, all belong to the daily occurrences of an industrial touch panel computer. That is why noax engineers only choose components for their units which are industrial grade.

An internal blower by ebm Pabst will make sure that the heat generated by a processor or a screen will be quickly discharged to the outside by means of special cooling fins. A micro controller regulates the temperature in such a manner that all components always function optimally. Information can easily be accessed by touch-entry, via the analog IPC resistive touch screen. Special mounts for the IPCs, developed by Top-Control, allow the user to operate the computers in comfort, since they are ergonomically optimized to be at chest level.

In November 2006, Karl Stabinger added the computers to his production. With their help order slips, and the processing associated with them, have become a thing of the past. Of course, use of the most modern IT in the wholesale confectionary company is only in its beginning stages, but Stabinger is convinced that the computers have a great future ahead of them in his undertaking.

noax IPCs support the Stabinger's workers even in the final control stage.

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