



## Case Study

### Mondi Gronau GmbH

Industrial PCs collect data  
and document processes during  
production of sanitary products



noax industrial PCs collect production and machine data, ensure traceability, and open up productivity potential

## Continuous Operation 24/7 – 16 Years Without Interruption

The Mondi Gronau factory has utilized noax industrial PCs for their processing operations since 2001 and have never looked back. The noax PCs ran like clockwork, 24 hours a day, seven days a week, for 14 years. They would have lasted a few years longer, but management decided to replace them with newer noax models featuring state-of-the-art technology.

### Shorter Setup Time

Mondi realized that production processes are more economical and efficient when the appropriate hardware is implemented to record information. Previously, Mondi used different computers to collect detailed production data, simplify quality control, ensure traceability, and reduce setup times. As a global company who operates with roughly 25,000 employees, Mondi Group requires modern and rugged technology to stay ahead of the curve. With 14 locations in Germany, the Mondi Group manufactures paper, sanitary products, and packaging materials. Mondi's subsidiary in Gronau, North Rhine-Westphalia, produces films, packaging material, and components for hygienic products.

### Operational Reliability Counts

When it comes to the manufacturing of products such as diapers and sanitary napkins, real-time documentation of the production process is essential to ensure complete traceability. This is vital especially if Mondi is only a mere component in another manufacturer's product.

To ensure traceability, Mondi relies on noax industrial PCs which are produced in Ebersberg, Germany in Upper Bavaria.

They play a key role in recording production and machine data. When the management staff decided to use noax IPCs in 2001, the dependability of the industrial computers was their main focus. An IT department employee explains, "When considering the investment decision, we paid close attention to longevity and operational reliability. With that said, noax was and is miles ahead of its competitors." The computers needed to be able to register, process, and store important information in real-time. This ensures all specifications are adhered to 24/7 and offers detailed insight to all manufacturing processes. The operational reliability of the noax PCs was Mondi's top priority, especially where traceability

is concerned. For example, it is possible to determine where there is further potential for rationalization.

### More Ergonomic

noax terminals are located directly next to the production machines. The plant floor employees can use them to record production data manually. However, they can also receive, process, and visualize information from the machines directly.

The collection of production and machine data is part of a Manufacturing Execution System (MES). This can be used to monitor processes and detect malfunctions quickly, so that interruptions and downtime are kept to a minimum. In addition to the noax IPCs, the Mondi factory uses an industry



*Whether using a keyboard or a barcode scanner, the noax IPCs allow real-time production data to be collected quickly and easily*

*When a company with 25,000 employees has been putting its trust in a piece of hardware for more than 16 years, the hardware must be dependable. This is why Mondi's Gronau factory has relied on noax industrial PCs since 2001. They guarantee that the processes throughout the entire production chain are reliably controlled, monitored, and documented. In addition, customers and users benefit from the safety and security of Mondi's operations. Thanks to the noax hardware, they can trust Mondi.*

*noax IPCs safeguard the manufacturing processes and the quality of products*



solution specifically designed for the production of films, paper, nonwoven fabrics, and high-tech textiles.

### Fluff, Dust, and Solvents

Over 100 noax industrial PCs are in use at Mondi's Gronau factory. A notable feature of the IPCs is that they all run the same software with the same core image. The system administrator justifies this approach, "We are simply too large of a company to work with a combination of different solutions. By having the same configuration and image on the industrial PCs makes our work much easier." The noax industrial computers provide the employees with considerable support throughout all processes. Take the data capture process during the manufacturing of films, for example. First, air is used to suck the film up approximately five meters in the form of a tube out of an extruder with a diameter of around 1.3 m. As soon as the film has cooled at the upper end of the extruder, it is cut in two and wound into rolls. Every roll is scanned with the help of a noax PDA terminal and weighed by a floor scale. Employees use the industrial PC to record the weight, save data, and to generate machine-readable labels containing product information. Without the industrial computers, these processes would have to be carried out manually, requiring considerable time and effort.

It goes without saying that the industrial PCs are exposed to tough conditions in production environments. This includes small parts flying around and fine mist from the printing inks or solvents used during production. When manufacturing sanitary product components, the computer hardware must be able to with-

stand extremely fine dust from the chemical pulp which settles on everything. The completely sealed design of the noax IPCs hold up



*Users find the simple touchscreen operation and clear graphics key advantages of the noax IPCs*

to their IP65 (NEMA 4) protection rating. The system administrator explains, "We started off using standard office computers in production, but it wasn't long before they broke. We opened them and the fans were full of dust particles. In contrast, the noax IPCs did not have a speck of dust in sight."

### Full-HD Touchscreens

In addition to dust particles, the noax MDA/PDA directly mounted on the machines are exposed to intense vibrations during production. However, even under these stressful conditions, the noax industrial PCs have been reliable for years. "We have never had any production downtime!" the system administrator reveals. "When it comes to dependability and operational reliability, noax IPCs really pay off. That's why we chose noax again when we changed to a new hardware generation two years ago." Management at the Mondi factory decided to replace the original terminals with a noax C21 which boasts a 21.5-inch touchscreen with full-HD capability.

The older noax IPCs featured only 12-inch and 15-inch displays. The new cast aluminum C21 is more user-friendly and offers a wider screen for better data readability. According to the system administrator, "It's simple – you can fit more information on full-HD touchscreens and record more inspection points. The graphics and information details are easier to read too." The new touchscreens offer employees easier operation and simplified work processes. By working directly with noax again versus testing a competitor PC, Mondi has demonstrated their continued trust in the tried-and-tested noax industrial PCs. When asking why noax, the system administrator responded, "Quality pays off! With noax, we know that we've got quality guaranteed." With over 15 years of experience, he should know.

*"When considering the investment decision, we paid close attention to longevity and operational reliability. With that said, noax was and is miles ahead of its competitors." "We have never had any production downtime!"*



## Mondi-Group / Mondif Gronau GmbH

### Company Profile:

The Mondif Group is an international company specializing in the manufacture of paper and packaging materials. They constantly develop innovative solutions. With subsidiaries in over 30 countries, Mondif employs over 25,000 employees worldwide. The site in Gronau, close to the Dutch border, produces films, high-quality packaging, as well as fill material for sanitary products.

For more information, please visit:  
[www.mondigroup.com](http://www.mondigroup.com)

## Requirements and Application

### Objectives:

- ✓ Machine data acquisition (MDA)
- ✓ Production data acquisition by employees (PDA)
- ✓ Ensuring traceability
- ✓ Documentation of the individual processing steps
- ✓ Increased productivity
- ✓ Reduction in setup and downtime
- ✓ Increased machine runtime
- ✓ Exploitation of rationalization potential

### IPC Requirements:

- ✓ Application in the entire production chain for packaging material and sanitary products
- ✓ Completely sealed construction in accordance with protection class IP65 (NEMA4)
- ✓ Bright, easy-to-read touchscreen display
- ✓ Resistance to continuous vibration
- ✓ Use of peripherals such as scanners, label printers, etc.
- ✓ Protection against chemical pulp dust, humidity, solvent mist
- ✓ Operational reliability and stability

## Overview of Components

### Hardware:

- C15 industrial PCs
- C21 industrial PCs
- Proprietary noax all-in-one motherboard
- Input: Robust rugged touchscreen
- Bright, high-contrast TFT display
- IP65 (NEMA 4) protection rating
- Completely sealed, with external fan

### Software:

- Operating system: Windows 7 Professional (64-bit)
- Microsoft Office

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