Multiprotocol Stack Secures Competitive Advantage

Drive manufacturer NORD DRIVESYSTEMS realizes more compact frame sizes and facilitates servicing
The NORD DRIVESYSTEMS Group and its 4,100 employees develop, produce and market drive technologies. NORD has 48 subsidiaries in 36 countries as well as additional sales partners in more than 50 countries, making it one of the leading international full-range suppliers in the industry.

Compact, compatible, future-proof - these were the specifications for the development of the decentralized frequency inverter NORDAC ON. The company is expanding its product range with decentralized drive electronics that address the special requirements in horizontal conveyor technology - whether in typical warehouse applications of logistics service providers, intra-logistics in companies, or in regard to critical temperature ranges in demanding production environments such as the food industry. Also on board: the multi-protocol capable Hilscher network controller netX 90.

**One design – Many protocols**

“We have been working with Hilscher for several years and quickly took notice when the basic principle of the multiprotocol stack came up on Hilscher’s agenda,” says Frank Wiedemann, Managing Director of NORD Electronic Drivesystems.

The worldwide usability of a product and its compatibility with different controllers, is becoming increasingly important for many customers of the NORD DRIVESYSTEMS Group. The integration of a flexible Ethernet interface in order to support different industrial communication protocols such as EtherCAT, PROFINET or EtherNet/IP, while at the same time requiring fewer hardware variants, was naturally given a high priority for the new NORDAC ON frequency inverter series. With Hilscher’s netX 90 chip, such adaptations to different protocols are accomplished with a simple change of the parameter settings.

**Time and cost savings thanks to the netX 90**

The application typically addressed with the NORDAC ON are surrounding the trend towards larger production plants, where in many cases hundreds or even thousands of drives are managed via one single controller. If an adjustment of the protocol stack is required or the firmware of the inverter needs to be updated, it is no longer
necessary to perform a manual on-site update on each individual drive. This functionality is implemented into the inverter by NORD DRIVESYSTEMS so that systems can be updated completely via Ethernet communication, which saves an immense amount of time and money, especially regarding very large applications.

**Reduced heat generation allows for more compact sizes**

The more compact the drive unit consisting of converter and motor is, the simpler and more versatile the options for embedding it into conveyor belts are - an important competitive advantage, especially in the market of horizontal conveyor technology for small and medium-sized product and packaging units. However, the more compact the drive unit and thus its surface area is, the greater the challenge of heat dissipation for developers and engineers becomes. This is where the Hilscher netX 90 comes into play with its multiprotocol stack. Frank Wiedemann: „We thereby save on additional microcontrollers, resulting in a lower heat generation and we can thus keep the size of the drives correspondingly small."

**Open for new standards**

During several years of cooperation with Hilscher, the developers at NORD DRIVESYSTEMS have already gained extensive knowledge with the netX 50 and netX 52 network controllers. When developing the NORDAC ON frequency inverter, it was important to NORD DRIVESYSTEMS to rely on the latest technology in order to meet the latest trends in industrial communication technology such as OPC/UA over TSN. Frank Wiedemann: „If this standard becomes established, we will also be able to follow this trend by adapting the multiprotocol stack.” Based on their experiences with the netX 50 and netX 52, programming the uniform firmware interface for the netX 90 was neither time-consuming nor labor-intensive for the developers at NORD.

“With the netX 90, we are implementing high functionality in the smallest possible space in our new product line. Thanks to the multiprotocol stack, we also achieve considerable savings in development time and costs.”

**Frank Wiedemann**

Managing Director NORD Electronic Drivesystems

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**Customer benefits of the netX 90 for NORD:**

- Fewer hardware variants needed thanks to multiprotocol stack
- Simplified worldwide servicing
- Less programming effort for in-house developers
- Future-oriented for upcoming communication standards

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For more Information on NORDAC ON, please visit: [bit.ly/3kEtL8V](https://bit.ly/3kEtL8V)
For more information on the netX 90, please visit: [www.hilscher.com/netx/](http://www.hilscher.com/netx/)
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