

## Using CAN the Swedish way

*Miunske in collaboration with Tekplus realized a CAN-based unit to control two such disparate functions as a tipper truck and a snow plough with only one device.*

(Photo: Fotolia)

Transporting goods on pallets in the morning, logs at mid-day, and bulk goods in the evening – three possible uses for one and the same lorry. What makes it so special is that it is possible to control the different swap bodies using just one central control unit. Although such a scenario is currently still a pipe dream, a major step forward in terms of implementation has already been taken in Scandinavia. Such technologically sophisticated systems are of particular interest to smaller companies in Scandinavia, the reason being that they often have only one chassis, but various attachments and superstructures.

Lastvagnsmontage i Eda, based in Charlottenberg in Sweden, has specialized in retrofitting lorries in line with customer-specific requirements. It can, for example, even carry out subsequent installations of loading cranes or snow ploughs. Equipped in this way, the vehicles are prepared for different assignments, depending on summer or winter operations. Swapping attachments and super-structures, however, has involved enormous effort up to now: no device that can be used to control two such disparate functions as a tipper truck and a snow plough has yet existed.

Together with Tekplus, Miunske has now implemented a CAN-based control unit. This unit is enhanced to include a radio remote control that makes external operation possible. This is particularly advantageous when it comes to function controls or attaching or removing individual components such as push plates. The CAN network control modules by Miunske offer multiple possibilities for individual project design. They are designed for use in mobile control systems in electrical systems of 9 V to 36 V and certified with E-certification. All

CAN products from the company use the communication standard ISO 11898 layer-2 and freely selectable bit rate.

The three companies have already had initial experience of working together on other projects. There was also a clear division of tasks in terms of snow plough control. While Tekplus, as the local partner, analyzed the installation space and designed the housing, Miunske developed the electronics including the software. The first prototypes were completed within six months and have since proved their worth in everyday use. Sara Jonsson, from P-M Anderssons Akeri, was one of the first to be allowed to test the German-Swedish solution. Her conclusion: “This new system has significantly improved the working environment, as all functions are located together directly on the armrest. This gives me a more comfortable sitting position instead of constantly having to bend forward to the dashboard, where the control unit used to be located.”

Potential buyers for this new control unit, which is based on an I/O module, already exist, as the installation overhead is significantly reduced, because two devices are now housed in the same box. Thanks to the bus system, cable harnesses can also be kept slimmer, while many more options are possible in technological terms.

Another feature is the special control unit: to be able to clean and grit the roads in the same work process in winter service operations, the loading area may be tilted while driving in Sweden. The grit then falls into a trailer, which carries out even spreading. Mattias Wennerstrand, project manager at Lastvagnsmontage responsible for the technical



Figure 1 + 2: Retrofitted customer vehicle from the inside and outside (Photo: Lastvagnsmontage i Eda)



## Swedish for beginners

Anyone wishing to get through the winter safely needs to be well prepared. No one knows that better than those who are often out in the snow. Winter tyres are, for example, compulsory in Sweden from October 1 to March 31, with tyres with spikes being allowed up to April 15. In principle, you should always set off with a full tank just in case you get stuck for a lengthy period, as it can take some time for a snow plough to come. It is therefore also advisable to take gloves, blankets, and hot drinks with you. A torch, jump leads, towing rope, and shovel should also always be on board.



Figure 3: The CAN-based snow plough control on the right and its remote control for external operation on the left (Photo: Klaus Nachtigall, Tekplus)

implementation, gave a positive review. “By modernizing our control unit, we have taken an important step towards the future. We had a strong sense that we would receive a good product from Miunske and Tekplus. And that’s what we now have.” Klaus Nachtigall, technical contact person and long-standing sales partner for Miunske in Sweden, was also visibly pleased: “There is a different mentality here in the North; it is not so much the price, but above all the result that matters in terms of collaboration here. And the result is impressive. We already have ideas for the next generation of control units, such as linking them to smartphones.” Such remote diagnostics would obviate the need for service engineers to travel hundreds of kilometers to fix a minor error. It is not possible to provide a conclusive description of all the other possibilities. The one certainty is that many

possibilities are conceivable. Ultimately, it is the market that decides what, if anything, is implemented. Adopting a wait-and-see approach, however, does not sit well with any of the participants. “There are many options”, said Nachtigall. “Further projects are being planned.”

### Contact

Bettina Miska  
Miunske  
[b.miska@miunske.com](mailto:b.miska@miunske.com)  
[www.miunske.com](http://www.miunske.com)



# ISIT

## CANopen SAFETY CERTIFIABLE STACK

61508

EN 50325-5

Certifiable

13849



62304

DO-178

CANopen Stack

COTS

Safety