



This is a real-life case study. However the customer has chosen not to feature their brand name.

Effects:

- Multi-network connectivity for either PROFINET or EtherNet/IP.
- Savings in overall development costs and shorter time to market.
- High performance to meet the requirements for stability and reliability in demanding applications.

"We finally found the Anybus solutions from HMS Networks. Their proven technology and professional services helped us earn the trust of key customers. We have chosen to use the Anybus CompactCom B40's which has helped us save overall development costs and shortened the time to market."

Multi-network connectivity helps weighing scale manufacturers solve communication problems

Here is how Anybus embedded solutions has helped an industrial weighing device manufacturer to get connected to any industrial network. Multi-network connectivity provides the weighing equipment with easy access to different control systems, speeding up the time to market.

Challenges

The customer, who has chosen not to feature their brand name explains: "Our weighing equipment is diverse, and the applications vary — chemicals, pharmaceuticals and biotechnology, food and beverage, etc. Our customers usually need access to different production lines with different PLC control systems, for example, if customer uses Siemens PLCs, our weighing equipment will need to have PROFIBUS or PROFINET communication, and if customers are using PLCs from Rockwell Automation, then EtherNet/IP should be supported. If the end users' applications are using Schneider Electric PLCs, they need to connect to Modbus-TCP."

Developing connectivity to all these networks from scratch is a daunting task. It is not just a matter of having knowledge and insights in industrial communications, there are also several other factors to consider:

Cost - No matter if they develop a solution by themselves or choose an off-the-shelf solution, weighing equipment manufacturers cannot avoid the cost issue. Developing a network connectivity solution will include production costs, development costs, labor costs etc.

Time to market - Depending on the specific application requirements, weighing equipment manufacturers need to consider the time from research and development to the final product.

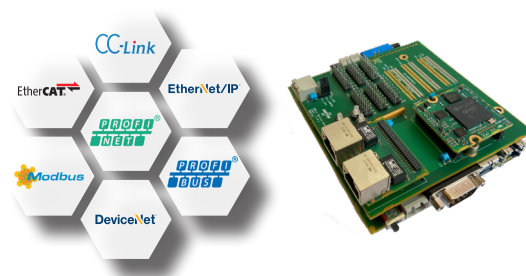
Research, development and technical capabilities - If choosing to develop a connectivity solution by themselves, the weighing equipment manufacturer need to assign a technical team for research and development, and consider whether they have the matching professional knowledge and experience.

Product maintenance and update - Network updates and upgrades are frequent, and therefore, the weighing equipment manufacturer should also consider the certification, update and upgrade of their products.

Weighing equipment manufacturers are facing different end users' applications, so the development or use of a single network protocol product cannot meet the needs of different applications, so they also face the need for multi-network connectivity, which is a great challenge for all of the above factors.

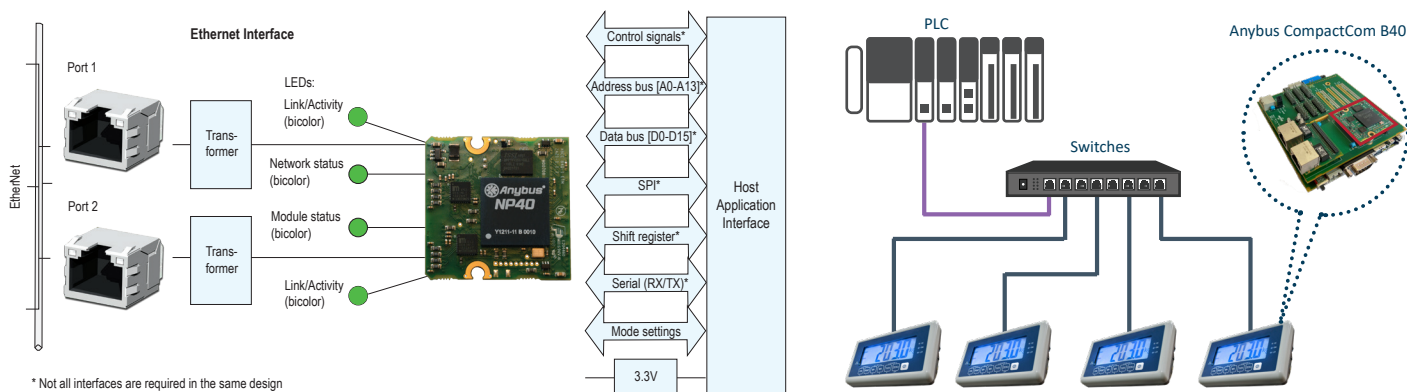
The solution

"For us, developing different network interfaces for our weighing scales to support multiple networks is not only expensive but also a slow process. We finally found the Anybus solutions from HMS Networks. Their proven technology and professional services helped us earn the trust of key customers. We have chosen to use the Anybus CompactCom B40's which has helped us save overall development costs and shortened the time to market. In addition, HMS products are also very reliable when it comes to network stability, which meets the requirements of demanding applications."



How it works

Anybus CompactCom B40 is a high-performance network interface in brick format, with ready-made hardware and software communication solutions for PCB mounting. The Anybus CompactCom B40 is driven by an ARM processor with HMS's driver via a high speed SPI interface. During the development, the customer could choose their own isolation and network connectors as well as a ready-made connector board from HMS.



* Not all interfaces are required in the same design

Development steps with Anybus CompactCom B40

Hardware design - HMS provides a hardware design manual and sample schematic diagrams.

Driver porting - HMS provides C driver and Chinese driver porting guide manual.

User programming - HMS provides a software design manual and rich, multi-platform sample codes.

Communication with PLC - HMS provides automatic generation tools for device description files, Chinese guide manuals and video guidance for communication with major PLCs.

Network conformance certification - For some weighing scales, there is a need for network conformance certification after product development, with network organizations such as PI and ODVA.

With abundant technical support tools and professional and full-cycle technical support, the weighing equipment manufacturer can complete the development of various communication interfaces within their time plan.

The results

The customer has installed more than 20,000 Anybus CompactCom B40 in different applications like chemical, pharmaceutical, food and beverage industries with demanding requirements.

