

## CASE STUDY: SERVOMOTOR DRIVES

<b>Solution:</b>	Embedded solutions
<b>Country:</b>	UK
<b>Company:</b>	Baldor Motors & Drives Ltd
<b>Summary:</b>	Previously, Baldor developed in-house communication interfaces. It was time-consuming and not open to other communication standards. By implementing Anybus CompactCom they can now to communicate with any PLC on any industrial network.



### The effects

- ✓ Reduced engineering costs.
- ✓ Baldor drives are now compatible with all major fieldbuses.
- ✓ Baldor can focus on core business instead of communication development.

*“The HMS’s strong point is that it provides a unified interface. The consistency of their range of product is unique. Thus, our engineering costs are reduced. We have the same kind of product for all different fieldbuses.”*

David Greensmith,  
Product manager, Baldor Motors &  
Drives UK Ltd.

## Consistent communication interfaces for Baldor

**Baldor Motors & Drives UK Ltd has upgraded its range of smart drives with HMS. This range is now able to communicate with any PLC, it is much more open to communication standards and its communication interfaces are consistent throughout the entire range. Baldor’s e100 is one of the very first of its kind: it integrates CANopen, it offers real-time Ethernet and it is highly adaptable to communication standards.**

“We wanted to develop enhanced versions of our MicroFlex e100 and MotiFlex e100 single- and three-phase drive ranges. We wanted them to be able to communicate with a PLC and to comply more easily with industry fieldbuses. To do this, our strategy was to use a standardised solution rather than develop these interfaces in-house. We decided to do this because we hadn’t the time to do it by ourselves and because it is not our core competence to do that. But, we found a higher added value than expected in the HMS solutions” explains David Greensmith , Product manager at Baldor Motors & Drives UK Ltd.

Baldor’s e100 servomotor drives, suitable for use in standalone motion control systems or networked systems, are now compatible with the Ethernet/IP, Modbus TCP and Powerlink industrial standards. Offering economic and space-saving solutions for many common single-axis automation requirements, the drives also feature an Ethernet interface compatible with the deterministic Ethernet-compatible motion control standard, Powerlink. The versatile drives may be used to control rotary and linear servo motors, linear motors, closed-loop vector motors, and in V/Hz control modes.

“This system is one of the very first of its kind: it integrates CANopen, it offers real-time Ethernet and it is highly adaptable to communication standards. Now, our new range provides system builders with a universal drive platform that can be used in many different ways to suit different customers and applications, from standalone motion control systems to networked systems hosted by PLCs or other devices. This solution simplifies automation for food, labelling, packaging, electronics, printing and wood/metalworking”, add David Greensmith.

*“With HMS we can interface with everything.”*  
David Greensmith.

The embedded Mint Lite capability is now being fitted without charge on all of Baldor’s MicroFlex e100 and MotiFlex e100s. It supports a range of basic motion programming requirements including performing relative and absolute moves, S-ramp profiles, jog and homing movements, changing target positions on the fly, registration moves, and reacting to real-time trigger events. The programming facility allows standalone drives to provide solutions for many common automation and machinery tasks such as cutting or feeding to length, indexing axes, simple pick and place motion, and machine adjustments such as changing guides or backstops to reconfigure machinery for new batches.

#### Flexible, consistent and open communication modules

“The HMS’s strong point is that it provides a unified interface. The consistency of their range of product is unique. Thus, our engineering costs are reduced. We have the same kind of product for all different fieldbuses”, explains David Greensmith.

“We have studied the offers of 2 or 3 vendors, but in the end, the HMS solution was more consistent and more standardized. The HMS solutions were also very compact. It was a key issue for the smallest sizes of our drive range. Anybus-CC, the solution we have implemented, is also very simple to install”.

Anybus CompactCom is intended for OEMs. It provides instant connectivity to all leading fieldbus, industrial Ethernet protocols, serial, USB and wireless networks without the need for any hardware and software changes to your automation device. Automation devices with an integrated Anybus-CC slot can use any Anybus-CC module. One module for a given network can simply be exchanged with another dedicated Anybus-CC module and be instantly connected to that network without the need



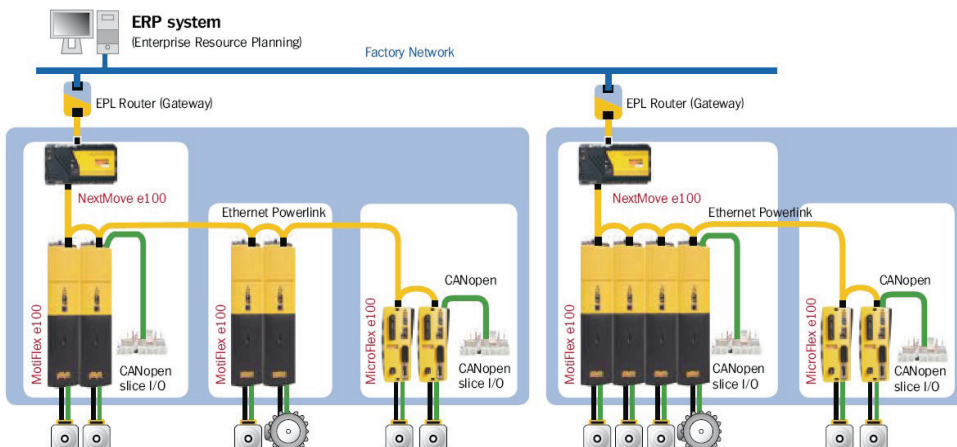
for hardware and software changes in the automation device. Anybus-CC enables savings of up to 70% on development costs compared with in-house development. Standardized hardware and software interface independent of the network.

“Another key issue was to allow for much more flexible communication with PLCs. Thanks to HMS our drives could be programmed with a PLC, using industry standards. With HMS we can interface with everything. As well as their own local input/output (I/O) and Canopen expansion, our drives also have option-card slots, providing configurability for specific applications including almost all fieldbuses”.

If used in a Powerlink system, the local intelligence adds versatile new system building capabilities. Critical events can be acted on directly, eliminating the impact of network and controller scan time latencies; the faster response of critical axes can be translated directly higher throughput.

“HMS is undoubtedly a partner for the future, because it offers flexibility to existing range and new generations of drives” concludes David Greensmith.

**Learn more on [www.anybus.com](http://www.anybus.com) or [www.baldor.co.uk](http://www.baldor.co.uk)**



*e100 range enables to simplify the motion system design, offering numerous advantages: fewer motion controllers, reduced cabling complexity, shorter machine build time and flexible design scheme.*