

YOU
HMS

Need for industrial network connectivity
Technical ideas
Total cost control
Time to market
Product lifecycle management
Existing products
End customer needs

SOLUTIONS

World leader in industrial communication
Proven solutions for fieldbus and industrial Ethernet
Anybus, IXXAT and Netbiter technologies
Internet of Things
Wireless solutions
All inclusive - development and manufacturing
Innovation and quality

Customized solutions from HMS Industrial Networks

Tailor-made industrial communication products
for your specific needs.





Your partner for industrial communication

Developing and producing tailor-made industrial communication solutions of the highest quality has always been key for HMS. By using HMS as your partner for industrial communication, you will benefit from HMS' proven and trusted base technology used in our own products, as well as our long experience of transforming technical ideas into products ready for production — always in an innovative and efficient way, and in close collaboration with you.

Work with the market leader

With millions of communication solutions installed globally, HMS Industrial Networks is undisputedly the world's number one provider of industrial communication solutions.

Customers include major industrial automation companies worldwide such as Siemens, Mitsubishi, Yaskawa, Rockwell Automation, Schneider Electric, Weidmüller and ABB, as well as small and medium-sized companies in a variety of industries. Industrial communication has proven to be a very important success factor for these companies and HMS has been there to assist.

HMS has several R&D and Solution Centers around the world with expertise in different industries, applications, technologies, networks and protocols. This expertise is with you all the way during the development and lifecycle of your specific communication solution.

By partnering with HMS you get:

- Access to some of the world's leading experts in industrial communication
- Shorter time-to-market compared to developing a communication solution yourself
- Minimized development risk
- Predictable development costs
- Continual technological improvements whenever there are changes to the standards
- Ready-made products, tailored especially for you, prepared for serial production.
- Efficient lifecycle management, manufacturing, logistics etc.

Custom projects are in our DNA

Ever since the start, HMS has been developing customized industrial communication solutions for the world's leading automation companies. Custom projects have been a major success factor for HMS and they remain highly prioritized for us to meet key customer demands, sharpen our skills and keep our ear to the ground of industrial automation.

"Combinnovations"

In a custom project, we combine ideas, technology and innovations from our respective fields into new "combinnovations," developed in an agile and collaborative way. Together we develop a solution that is beneficial for both parties.

Jörgen Palmhager, COO, HMS Industrial Networks

HMS products & technologies as a starting point

With HMS as your communication partner, you get a head start as you can leverage on the experience built into our products and technology over 25 years.

Take advantage of HMS standard products....



Anybus® — Multi-network connectivity within fieldbus and industrial Ethernet

By embedding an Anybus solution into your device, you enable it to connect to any fieldbus or industrial Ethernet network. Anybus products include both embedded communication interfaces as well as stand-alone gateways. There are also solutions for wireless connectivity.



IXXAT® — Communication solutions for machines, safety and automotive

IXXAT technology is widely used for communication between components within machines and includes standardized software and hardware as well as customized OEM solutions.

With a long track record within CAN-related connectivity, IXXAT solutions enable communication inside machines, industrial automation devices, medical equipment etc.



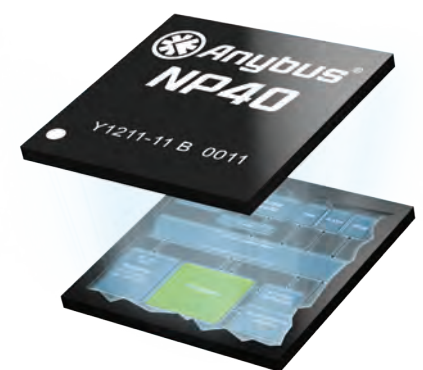
eWON® — Remote access and management of industrial equipment

The eWON remote solutions give you control of your field equipment, anytime, anywhere. You can program PLCs and machines remotely, just as you were on site. You can also monitor parameters and collect data online in a standard web interface and get alarms via e-mail or SMS.

...or use HMS core technology as a springboard

In a customization project, we take advantage of the knowledge built into HMS' core technology. Competence areas include:

- **Embedded fieldbus and industrial Ethernet technology.** HMS has ready-made solutions for all major industrial networks such as PROFIBUS, PROFINET, EtherCAT, EtherNet/IP, CAN/CANopen, CC-Link, POWERLINK etc. The portfolio also includes protocol stacks, IP cores and multi-protocol chips and this shortens your development time considerably. Furthermore, HMS has extensive experience in various microcontrollers as well as FPGA technology.
- **Industrial gateway technology.** We can for example combine your proprietary communication interfaces and protocols with standardized fieldbus and industrial Ethernet networks.
- **Safety solutions in accordance with IEC 61508.** Our long experience of integrated solutions for functional safety will get you on the right track when it comes to implementation, verification and certification.
- **Wireless solutions.** Extend and expand your industrial networking capabilities through solutions with state-of-the-art WLAN, Bluetooth and cellular technologies.
- **Remote solutions.** The eWON Netbiter remote management solution can be customized when it comes to, for example, user interface and connectivity gateways.



Leverage on HMS' core technology such as the Anybus NP40 — deemed to be the best network processor on the market by independent analysis firm Frost & Sullivan.



The level of customization is up to you

Customization projects range from simple brand labeling to development of completely new products. Whatever the scope, developments are based on solid technology and experience allowing you to leverage on thousands of hours of research and development time already spent by HMS. This minimizes your costs and your time to market.



HMS can develop tailor-made hardware and software according to your specific needs.

Fully customized solutions

If you have really specific requirements, we design something the world has never seen before. Together, we tailor the right solution for your application in terms of hardware, software, communication interfaces, performance and functionality.

To leverage on existing knowledge and technology, we deploy our proven multi-protocol chips such as the Anybus NP40 as well as our protocol stacks and IP cores. To supplement these, we include special micro-controllers and develop customer-specific hardware and software components.

Hardware and software modifications of HMS standard products

Typical customization requirements are higher IP protection types, special board sizes and form factors, special connectors, special power supplies, housing designs or special protocol implementations.

HMS can help with preparations for network certifications and tests — for example by providing engineering tools from PLC manufacturers. Activities range from prototyping and tests, equipment design, industrialization, field trials and serial production to lifecycle management and technological improvements.

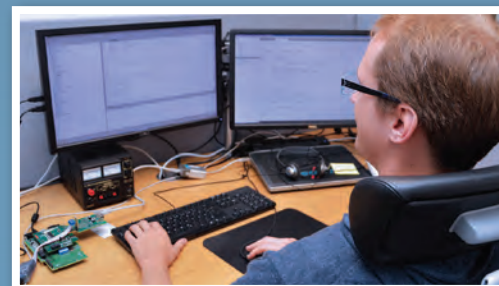


We start with a standard HMS product (in this example Anybus Communicator) and tailor hardware and software according to your requirements.

Software and software services

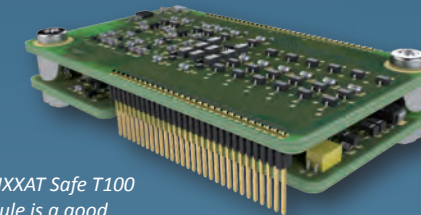
HMS' long expertise and extensive library of software stacks and IP cores for industrial communication allow us to build software solutions for your specific applications.

Our software portfolio includes stacks for embedded solutions, IP-Cores (FPGA), PC-based drivers (Linux, Windows), OEM-specific tools and software for web-based remote management.



Communication solutions for functional safety

HMS has long expertise in solutions for functional safety in accordance with IEC 61508. Implementing safety functionality can be challenging and requires a great deal of knowledge. This competence is at your disposal during the implementation project. Ready-made stacks and hardware are available to be used and customized to your specific needs. We cooperate with TÜV as the testing laboratory and certification body.



The IXXAT Safe T100 module is a good start when designing a customized communication solution for functional safety.



OEM Toolbox: Create your own customized communication solution

The OEM Toolbox from HMS is a programmable platform for developers making it possible to develop your own application within the Linux environment of HMS industrial gateways.

The OEM Toolbox includes white-labelled gateways and a Software Development Kit (SDK) enabling developers to create customized applications for the gateways.

With the SDK, you can quickly develop connectivity solutions for traditional automation tasks as well as IIoT applications.

Complete system solutions

We cooperate closely with you to develop a tailor-made system solution that complies with your requirements. We carry out feasibility studies, create a concept, develop the required hardware and software as well as final system and verification tests. The result is a solution that has been optimally adapted to your requirements and specific field of application.

Within this scope, HMS platforms for remote solution, wireless communication and Internet of Things will be important going forward.



HMS often design complete systems like the above examples for controlling stages or elevators.



Labels, laser markings, configuration files etc. can be adjusted according to your needs.

Brand labeling

If you want to offer our standard products under your own brand, HMS offers brand labeling. This can include customized housing color, specific labeling, logos, manuals, article numbers, packaging and OEM-specific product configuration. You benefit from proven products of the highest quality and HMS' streamlined supply chain.

We do customizations in all types of segments and industries. Factory Automation is our core market, but we also do a lot of customizations within Automotive, Building Automation, Medical Technology, Semiconductor, Transportation, Power and Energy etc.

Markus Demaria
R&D Director,
HMS Technology Center Ravensburg



With you all the way!

The process from idea to ready-made product ready for production

Scope definition



“Think it”

In order to agree on the right solution for you, we discuss hardware, software, time, certifications and project framework in an innovative and open way. We also decide if we need a feasibility study or not. This forms the basis for the project quotation.

Depending on project scope and demands, we decide if the project will be done at the Development Centers in Halmstad or Ravensburg, or at one of our Solution Centers in the US, Germany or Japan.

Project initialization



“Start it”

HMS assigns a project manager who is your main point of contact.

The project schedule is defined and resources are allocated. The project gets underway with initial start-up meetings and milestones are established.

Project-critical links between your staff and the engineers in the HMS project team are established.

Development



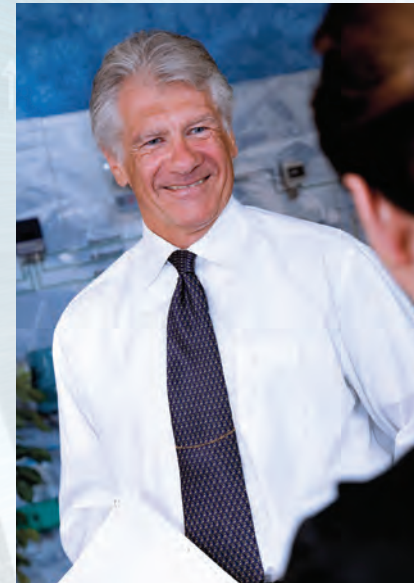
“Build it”

HMS manages the development project in close collaboration with you with a clear focus on milestones and deadlines.

We utilize an agile development approach where you gain insight into design, implementation, testing and certification for temperature ranges, EMC etc.

Apart from hardware and software development, we focus on industrialization aspects — preparing the product for serial production.

Sign-off



“Release it”

We move from development phase to production phase preparing for market launch of your solution. After successful market release, the development project is finalized and signed off.

HMS is happy to assist you with training getting your staff ready to promote the industrial communication solution.

Production & Logistics



“Supply and maintain it”

HMS takes care of the complete supply chain, from the prototype right up to serial production in large quantities.

HMS has several manufacturing sites around the world and your product will be produced in the location most suitable for your requirements. The production facility at the head office in Halmstad handles low-volume production, while larger volumes are produced by subcontractors in Europe and Asia under HMS supervision. Licensed manufacturing by you can also be negotiated upon request.

Furthermore, HMS can take responsibility for technical support and “Lifecycle Management” of both hardware and software, making sure your product is supported from the cradle to the grave.

Each custom project is unique, that is the whole idea of a customization project. But you can still benefit from a standardized procedure and proven methods based on experience. HMS and all our development and manufacturing processes are certified according to ISO 9001.

Over the years, we have gained a lot of in-depth knowledge in many applications and devices and we have been especially successful within customized solutions for drives.

*Johan Hamann,
Product Manager –
Customized Products,
HMS Industrial Networks*



Work with HMS.

The number one choice for industrial communication.

Network connectivity expertise at your service

With millions of communication solutions installed globally, HMS Industrial Networks is undisputedly the world's number one provider of industrial connectivity solutions.

Customers include most major industrial automation companies such as Siemens, Mitsubishi, Yaskawa, Rockwell Automation, Schneider Electric, Toshiba, Panasonic, ABB and Hitachi, as well as small and medium-sized companies in a variety of industries.

Technical services — with you all the way through your project

By partnering with HMS, you get access to the knowledge of some of the world's leading experts in industrial connectivity — experts who are with you all the way from the design project and throughout the product lifecycle.

With HMS as your communication partner, you will not have to worry about network upgrades, new technologies or conformance testing. HMS handles all connectivity issues, so you can focus on your core business.

Facts about HMS

- Operations in 13 countries: Sweden, Germany, Belgium, USA, Switzerland, Japan, China, Italy, France, UK and India.
- Customers in more than 50 countries.
- Head office in Halmstad, Sweden.
- Founded in 1988.
- More than 500 employees.
- Listed on NASDAQ-OMX Nordic Exchange in Stockholm.
- Free technical support.

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