

This is HMS Networks!



Hardware Meets Software™



# Hardware Meets Software. All the time. Everywhere.

## CONNECTED WITH HMS PRODUCTS



HARDWARE: Industrial robots  
SOFTWARE: Industrial Ethernet network



HARDWARE: Packaging machine  
SOFTWARE: Remote programming tool



HARDWARE: Navigation equipment  
SOFTWARE: Steering system



HARDWARE: CNC Machine  
SOFTWARE: Functional safety



HARDWARE: Power Generator  
SOFTWARE: Remote management system



HARDWARE: Forklift (AGV)  
SOFTWARE: Wireless network



HARDWARE: Servo drives  
SOFTWARE: Real-time control network



HARDWARE: Air conditioning unit  
SOFTWARE: Building management system

## Quick facts

Founded in	1988
Sector	Industrial ICT (Information and Communication Technology)
What we do	Products that enable industrial equipment to communicate and share information.
Operations in	18 countries
Employees	+800
Top 10 markets	Germany, North America, Japan, France, China, Sweden, Italy, UK, Benelux, Spain.
Head office	Halmstad, Sweden
Product brands	Anybus, Ewon, Intesis, Ixxat (Owasys)
HMS stands for	Hardware Meets Software™
Vision	To become the World's greatest industrial ICT company.
Mission	We enable valuable data and insights from industrial equipment allowing our customers to increase productivity and sustainability.

“ Millions of industrial machines and devices use innovative HMS technology to communicate. Our solutions help them become more **effective, productive** and **sustainable**. ”

Staffan Dahlström  
President and CEO





# A tale of innovation and growth

“There must be an easier way to connect industrial devices to any industrial network.”

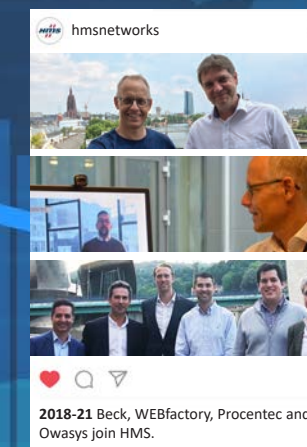
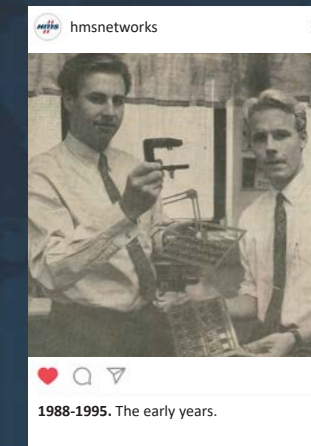
This is the innovative idea that propelled Nicolas Hassbjer's and Staffan Dahlström's start-up on a growth journey from a university project to world-leader in Industrial Information and Communication Technology.

Today, HMS employs 800 people in 18 countries and delivers communication technology to millions of industrial devices, machines and systems around the world.

A lot has changed since HMS was founded in 1988, but our ambition still remains the same: we want to provide easy-to-use, sustainable communication solutions which save users time and money.

For thousands of industrial companies all over the world, HMS is a trusted partner for industrial communication supporting from first product specification to full-scale production, while assisting with technical services during the product life cycle.

## Some posts from HMS' growth journey



### Onwards!

From two-man startup to world leader within industrial ICT — we continue our quest to become the World's Greatest Industrial ICT Company.



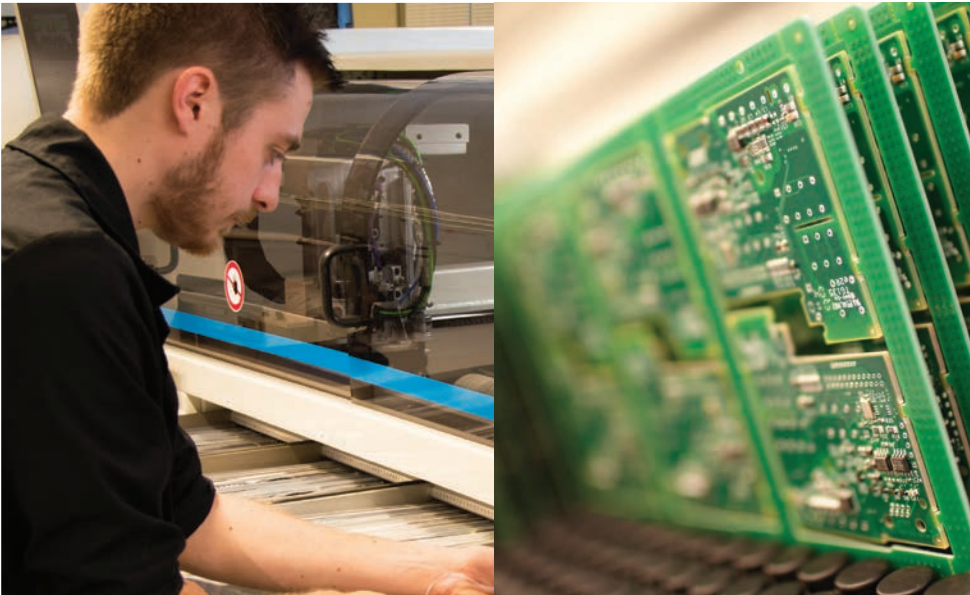
# Quality, productivity and sustainability at heart

These things just have to work

HMS products handle business-critical data that keeps production lines, factories, telecommunications and industrial machinery running. This puts very high demands on quality and reliability.

Quality, productivity and sustainability has always been at the heart of HMS and everything we do, from selecting suppliers through product development, manufacturing and customer service.

According to our customer surveys, it is the high quality and the longevity that customers appreciate most about our solutions. This solid quality enables us to offer unique services such as free technical support and long product guarantees.



## HMS Production

Main site:	Halmstad, Sweden
Additional production:	Subcontractors (EMS) in Europe and Asia
Quality goal:	200 PPM (0.02% errors)
Quality Management system:	According to ISO 9001:2015
Deliveries:	100,000 products each month
Product traceability:	Down to PCB level

# Our primary environmental goal: CO<sub>2</sub> Net Positive in 2025

“

The environment is one of the three focus areas in our 2025 strategy. As a company, we can offer a lot of sustainability gains for our customers as they can use our products to reduce service trips and optimize energy use.

But we can also do a lot in our own operations to reach our goal of becoming CO<sub>2</sub> net positive in 2025.

”

*Kristina Altner  
Sustainability Manager*





# Our playing field — The Industrial ICT Arena

ICT stands for Information and Communication Technology. On this playing field, HMS products enable industrial machines to communicate with software and systems — Hardware Meets Software™. The customers are mainly found in industrial automation and building automation.



## Industrial Communication — Control

### Primary HMS brands:

Anybus, Ixxat

Control refers to control-centric real-time communication between devices, machines and systems in industrial automation. Increased automation and industry 4.0 are strong driving trends.

## Industrial Communication — Information

### Primary HMS brands:

Ewon

Within information-centric applications, data from industrial equipment and processes is provided securely to IT systems for improved insight and decision-making. Data can be provided remotely as well as on premise. HMS is market-leading in remote access and data connectivity for machines.

## Building Automation

### Primary HMS brand:

Intesis

Modern buildings include highly advanced networks with thousands of devices and machines that need to communicate. Intesis® offers communications solutions designed for buildings.



## 5G opens new doors

“

We see a lot of new opportunities within the *Communication Infrastructure* part of our playing field. Especially within 5G. With 5G in a factory, users benefit from a robust wireless network which meets industrial demands in terms of communication speeds and security – along with all the flexibility and mobility that comes with wireless.

”

Jörgen Palmhager  
CTO





## Connecting any device, machine and network

Millions of devices can't be wrong! As the clear market leading solution, Anybus® products make it possible to connect any industrial device to any industrial network or the Internet. Industrial networks are sometimes referred to as fieldbuses (hence Anybus) and come in different variants depending on market and industry. It's much like the multitude of languages used around the world. Anybus makes it possible for industrial equipment to communicate anywhere.



**Bartek S. Candell**  
General Manager  
Business Unit Anybus

### OFFERING



**Anybus Embedded**  
Network cards which are embedded into the customer's product to provide network connectivity.



**Anybus Gateways**  
More than 300 stand-alone gateways for communication between all popular industrial networks.



**Anybus Wireless**  
Connects networks, machines and devices wirelessly over Bluetooth, WLAN or cellular networks.



**Anybus Diagnostics**  
Protects, monitors, analyzes, and troubleshoots industrial networks.



Customer example:

## Always connected, always sharp!

**Hardware:** Paper cutting machine  
**Software:** Industrial Ethernet network

American machine builder JSI uses an Anybus gateway to connect their machines to a controlling network. This enables them to sell their machines to any region or industry, regardless of network. They also use Anybus Wireless solutions to get access to data from their machine via an iPad.





## Remote solutions for industrial applications

Ewon® provided IIoT solutions before the term IIoT even existed. With Ewon solutions, machines are accessible in a secure way over the Internet, giving users access to the machine and its data anytime and anywhere. Ewon has been voted the number one choice for Remote Access by the readers of Control Design Magazine — 6 years in a row!



**Alexander Hess**  
General Manager  
Business Unit Ewon

### OFFERING



**Ewon Cosy**  
Provides machine builders with a secure tunnel for remote maintenance and troubleshooting.



**Ewon Flexy**  
Industrial routers and IIoT gateways for remote access and data services such as remote surveillance and information gathering.

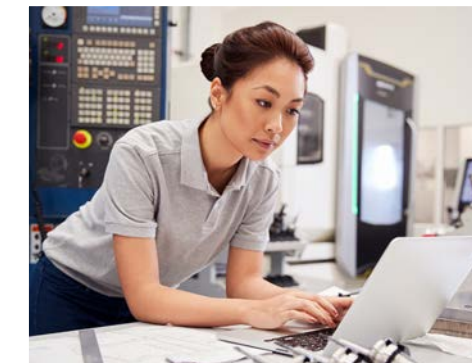


**Ewon Talk2M®**  
A secure global, industrial cloud solution for remote access and data transmission to and from connected machines.



**Ewon Netbiter**  
An out-of-the box remote management solution, especially suitable for power generators and tank monitoring.

HMS PRODUCTS



Customer example:

## Online control of power generators in hospital

**Hardware:** Backup power generator  
**Software:** Remote management system

In the plant room of the New Royal Adelaide Hospital in Australia, you will find six 21-ton power generators. With the help of Ewon's remote solutions, engineering firm RCR O'Donnell Griffin can commission and troubleshoot the generators remotely, making sure they are always ready to start if needed.





HMS PRODUCTS

## Connecting buildings

Modern buildings include highly advanced networks with thousands of devices and machines that need to communicate. Intesis® offers communications solutions designed for buildings. Building automation is a rapidly growing market where HMS has identified excellent growth opportunities for the future.



**David Garcés**  
General Manager  
Business Unit Intesis

### OFFERING



**Intesis protocol translators**  
Intesis offers gateways which act as translators between, for example, thermostats, lighting ballasts, smart meters, and building management systems running on KNX, BACnet or Modbus. The communication is configured with the software Intesis MAPS.



**Intesis AC interfaces**  
Intesis is known for the market leading ability to design specific AC interfaces for the major vendors of air conditioning equipment. Today, Intesis enables more than one million AC units from 100 different brands to communicate.



**Intesis cloud solutions**  
Intesis also offers solutions to monitor and control building equipment remotely via the cloud — using a web interface or a smartphone app.



Customer example:

## HVAC integration in 280 rooms

**Hardware:** Air Conditioning Units  
**Software:** Building Management System

Roomers, a 5-star luxury hotel in Munich with 280 rooms, uses Intesis AC interfaces for integrating Hitachi air conditioning units with a local room controller and a third-party premium design thermostat. The Intesis gateway allows the AC unit and the BMS system to communicate.





## Making machines work on the inside

Ixxat® is a well-known brand in the automation market, especially for machine communication and security. Ixxat® stands for extensive expertise in CAN, a technology originating in the automotive industry but nowadays used in many fields. The Ixxat offering primarily consists of a large number of products that solve the most common types of communication problems in machines, including safety aspects. It also contains products that solve new communication challenges in smart grids.



**Alexander Hess**  
General Manager  
Business Unit Ixxat

### OFFERING



**Industry**  
Connectivity solutions for machines and development of hardware, software and associated services.



**Safety**  
Solutions for easy implementation of safety communication into industrial equipment.



**Automotive**  
Test tools and hardware for use in test benches, during development, and for troubleshooting.



Customer example:

## Giving electric vehicle batteries a second life

**Hardware:** Used electric vehicle batteries  
**Software:** Fieldbus and Smart Grid networks

Connected Energy Ltd in the UK is building large energy storage systems made of used batteries from electric vehicles. Ixxat repeaters and gateways enable data communication between the battery modules to enable large arrays. Ixxat technology also enables connection of these systems to modern smart grid energy networks – enabling control, monitoring and predictive maintenance.



HMS GROUP MEMBERS

**owasys**<sup>®</sup>

Member of the HMS group

## Wireless communication for mobile machines

### OFFERING

Owasys is an independent member of the HMS Group offering wireless communication platforms to enable remote monitoring and control of a wide range of mobile machines.

Products include owa4x — an IoT gateway that processes and sends data from industrial devices to the cloud, and owa450 which is an IoT platform for controlling and monitoring data from vehicles and industrial machines.

Users benefit from reduced fleet downtime and predictive

At the HMS head office in Halmstad, you will find corporate functions such as management, global sales & marketing, finance, HR and IT. And also the Anybus Business Unit.





# Always at the forefront of technology

HMS has always been at the forefront of technology. Here are some of the latest technologies we work with.



## 5G Connectivity

Safer, flexible and more efficient manufacturing systems will be possible thanks to the ultra low-latency and reliability of 5G connectivity.



## Industrial Internet of Things

Connecting industrial hardware and software (e.g. IoT systems) is exactly what HMS stands for. Hardware meets software when cloud and Edge solutions get machines connected.



## Smart Grid

The energy grid of the future will require devices and systems to communicate for efficiency and sustainability purposes. HMS makes it happen.



## Wireless solutions

Wireless technology such as Bluetooth and WiFi/WLAN are increasingly used also in demanding industrial applications. HMS leads the way.



## Cloud and Edge solutions

Cloud and Edge solutions are both used to realize Industrial IoT. Edge solutions cater for more industrial, time-critical demands thanks to decentralized data processing.



## Artificial Intelligence

Artificial Intelligence will help industrial automation become more effective. Information from machines is key. This is where HMS can help.



## Industrial security

Protect your data and your industrial systems with HMS' advanced security features and discover best practices for securing your IoT systems



## Industrial Ethernet networks

Enable any industrial device to communicate with any Industrial Ethernet, fieldbus network or industry cloud, wired, or wirelessly.



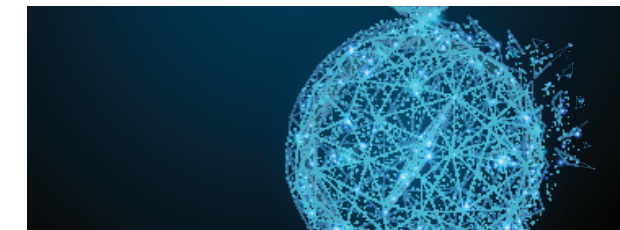
## Functional Safety

Products and services for a faster and easier safety implementation – either using communication modules or with highly flexible protocol stacks.



## Network Diagnostics

Procentec is a stand-alone brand of HMS, offering network diagnostics solutions for industrial networks that minimize costly downtime in factories.



## TSN – Time Sensitive Networking

TSN is a new set of standards specifying real-time Ethernet-based communication.



## TechTalks from HMS Networks

On the HMS website, you can stay up to date on the latest trends in the world of automation and IoT. Learn from HMS' experts in the TechTalks webinar series.



Close to you. Wherever you are.

With offices in 18 countries and distributors in another 50, we stay close to our customers in the major industrial markets.

HMS’ five Market Units handle sales, support and other customer service activities on the local markets. There are also four Business Units, developing the actual products to be sold. The combination of Business Units and Market Units gives HMS an international perspective, with local presence.



Head Office

**HMS CORPORATE**  
Halmstad (Sweden)  
Head office for HMS operations, with central functions like IT, accounting/finance, global sales and marketing.

Market Units

- MARKET UNIT CONTINENTAL EUROPE**  
Karlsruhe (Germany). Country offices in Mulhouse (France) and Milan (Italy).
- MARKET UNIT AMERICAS**  
Chicago (USA)
- MARKET UNIT ASIA PACIFIC**  
Shin-Yokohama (Japan), Pune (India), Singapore, Ho-Chi Minh City (Vietnam), Melbourne (Australia) and Seoul (South Korea).
- MARKET UNIT GREATER CHINA**  
Beijing (China)
- MARKET UNIT NORTHERN EUROPE AND REST OF WORLD**  
Halmstad (Sweden), Coventry (UK), Hedel (Netherlands) and Dubai (UAE).

Business Units

**BUSINESS UNIT ANYBUS**  
Halmstad (Sweden)

**BUSINESS UNIT IXXAT**  
Ravensburg (Germany)

**BUSINESS UNIT EWON**  
Nivelles (Belgium)

**BUSINESS UNIT INTESIS**  
Igualada/Barcelona (Spain)

Additional development site

**WETZLAR, GERMANY**  
HMS Technology Center Wetzlar, a key technology and platform development site within HMS.

Members of the HMS Group

**PROCENTEC**  
Rotterdam (The Netherlands). Additional offices in Delft (Netherlands), Karlsruhe, Gera, Nuremberg (Germany), Manchester (UK) and Brescia (Italy)

**OWASYS**  
Bilbao

**WEBFACTORY**  
Buchen (Germany), Sibiu (Romania).





# HEART, MIND AND SOUL IN WHAT WE DO

Although HMS is a truly international company, we like to think that we share a common culture. Heart, Mind and Soul is a summary of how we do things (makes for a pretty good abbreviation too).



Heart means collaborating, engaging and taking responsibility for what we do.



Mind means building for the future, focusing on sustainable growth and creating win-win situations for us and our partners.



By Soul, we mean to dare, drive and inspire when it comes to our working life.

MORE ON [WWW.HMS-NETWORKS.COM](http://WWW.HMS-NETWORKS.COM)