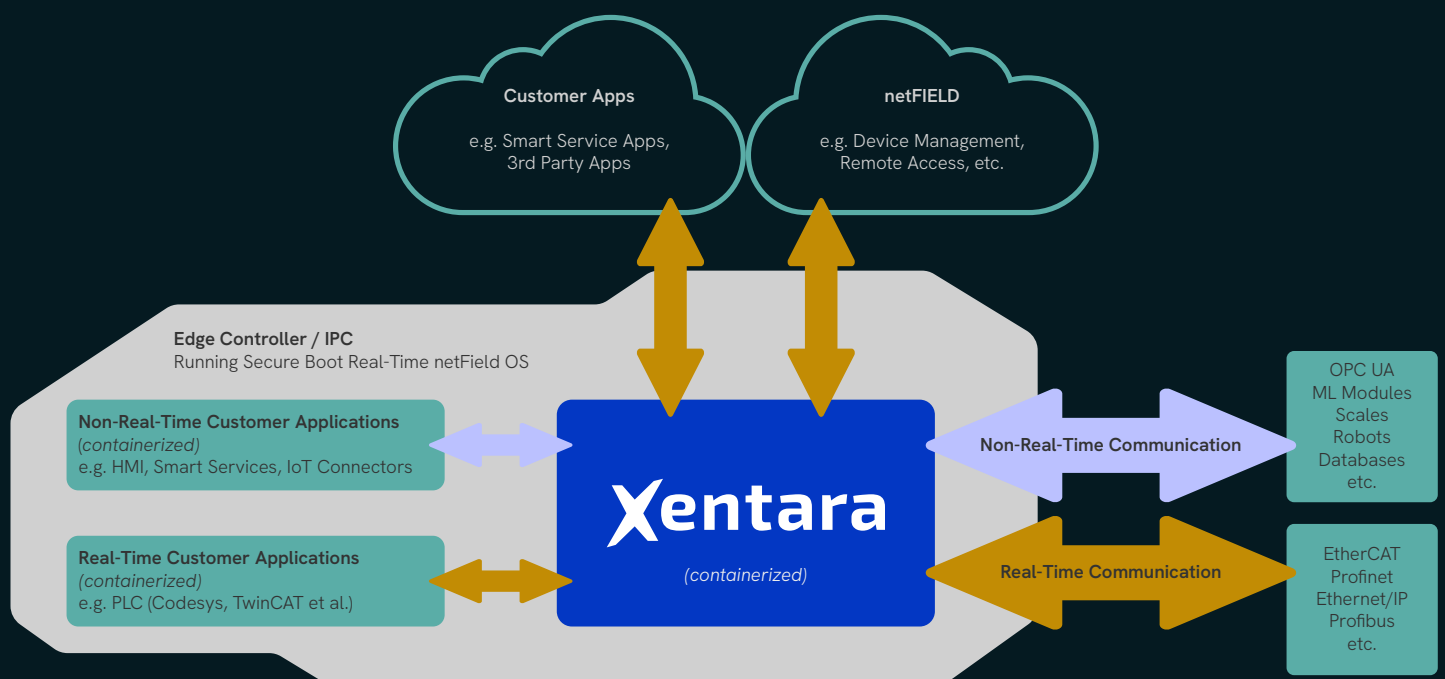# Software-Defined Automation Platform
Xentara and Hilscher offer an open and modular platform for real-time control and IT/OT convergence

Xentara and Hilscher are partnering to offer custom automation packages tailored for key series customers, combining hardware and software to enable seamless integration and control of industrial processes. This collaboration significantly expands both partners' product portfolios.

embedded ocean's modular, secure, real-time automation platform, Xentara, serves as the foundation for powerful control solutions. Hilscher complements this with its industrial communication expertise and the netFIELD platform, which provides robust edge gateways, centralized device and app management, and Industrial Communication Apps supporting PROFINET, Ethernet/IP, EtherCAT, and other industry protocols.

Customer Apps

e.g. Smart Service Apps,
3rd Party Apps

netFIELD

e.g. Device Management,
Remote Access, etc.

Edge Controller / IPC
Running Secure Boot Real-Time netField OS

Non-Real-Time Customer Applications
(containerized)
e.g. HMI, Smart Services, IoT Connectors

Real-Time Customer Applications
(containerized)
e.g. PLC (Codesys, TwinCAT et al.)

Xentara

(containerized)

Non-Real-Time Communication

Real-Time Communication

OPC UA
ML Modules
Scales
Robots
Databases
etc.

EtherCAT
Profinet
Ethernet/IP
Profibus
etc.

Xentara

hilscher

Hardware

e.g. netFIELD UNITY Pro (based on Advantech UNO-137-V2 Edge Controller)

- Intel Atom x6413E (1.5 GHz) or x6425RE (1.9GHz)
- 8GB DDR4 memory
- Wide power input range (10 ~ 36 VDC)
- Wide operating temperature range (-40 ~ 70 °C/-40 ~ 158 °F)
- Port isolation for 8 x DI, 8 x DO, 2 x COM
- DP++ ensures HDMI/DVI compatibility
- Dual storage: 1 xM.2 M-key 2242 PCIe/NVMe or SATA/SSD and 1 x mSATA
- Onboard TPM 2.0 hardware-based security
- Ruggedized DIN-rail kit
- Compliant with IEC 61010-1 safety requirements
- Hilscher cifX PC card as Universal Real-Time Ethernet interface (Master or Slave)

Software

Edge OS Runtime
netFIELD OS includes a basic range of system software and runtime components. netFIELD OS Edge is the heart of the system, a YOCTO Linux-based operating system that runs on a great variety of edge devices.

netFIELD Device Management
Device and App Management plus Remote Access. The netFIELD IoT ecosystem is built on Docker container technology that lets you package software applications to run quickly and reliably in different environments.

Xentara
Advanced industrial control and convergence platform powered by embedded ocean's unique Real-Time Core and Timing Model

True Real-Time Control on Cost-Effective IPCs
Leverage reliable real-time control on affordable, readily available hardware!

Reliable Timing Model
Benefit from a unique timing model that manages temporal processes with unparalleled precision—perfect for high-accuracy industrial applications.

Unmatched Interoperability
Seamlessly connect previously incompatible machines, systems, and applications, unifying your control and communication pathways.

Flexible, Modular, and Container-Ready
Our open platform solution is modular, fully containerizable, and ideal for scalable, future-proof applications.

About embedded ocean GmbH

embedded ocean GmbH is a German software company based in Munich with the mission to drive next level industrial productivity, resource-efficiency and resiliency for Germany, Europe, and the world. Our mission statement is to drive the Fourth / Fifth Industrial Revolution through swift and easy implementation of modern Industrial IoT applications based on our real-time control and IT/OT convergence platform Xentara. Especially in the field of Industrial Control and Robotics, Xentara's unique real-time core provides an advantage over other established solutions and offers the first truly seamless bridge between the worlds of Operational Technology (OT) and Information Technology (IT).

We Make Industrial Transformation Happen.