TECNO LOGIX

ENGINEERING AND AUTOMATION

DEVELOPMENT TOOLS
MIDDLEWARE AND SOFTWARE LIBRARIES

SALES AND
DISTRIBUTION

TRAINING
AND COACHING

ENGINEERING SERVICES

DEVELOPMENT,
DESIGN AND
CUSTOMIZATION

INDUSTRIAL
AUTOMATION

EMBEDDED SYSTEMS – AUTOMATION SOLUTIONS

GRAPHICS

INDUSTRIAL
COMMUNICATION

IoT AND CLOUD
CONNECTIVITY

FUNCTIONAL
SAFETY
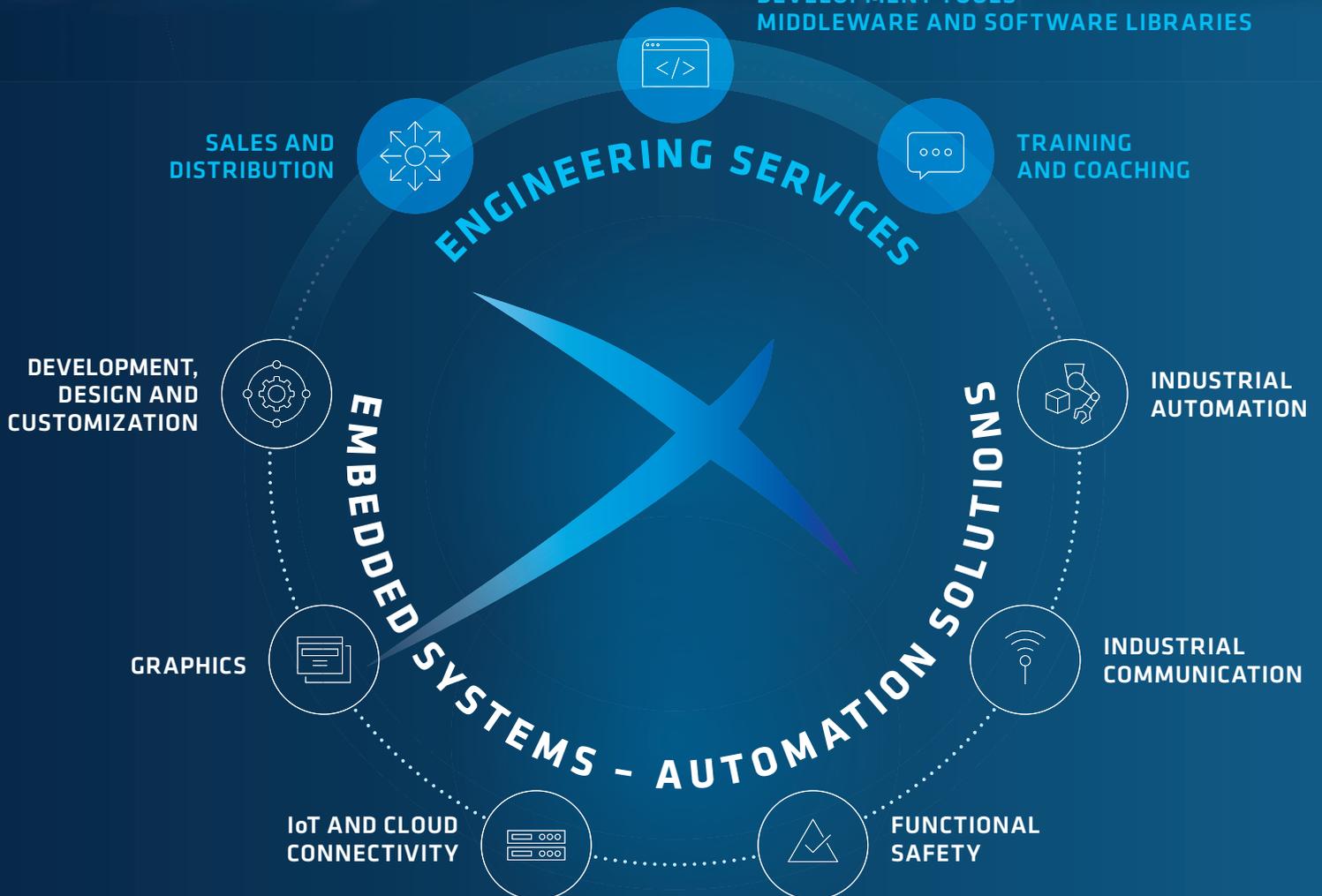
EMBEDDED SYSTEMS

- Industrial Automation
- Drives, Motion Control
- Distributed Automation Systems
- Medical Engineering
- RTOS in Embedded Applications
- Linux in Embedded Applications
  - → Linux
  - → Embedded Linux
  - → Linux on ARM

FIELDBUSES

- Protocol integration into Customer application

DEVELOPMENT

Hardware

- Circuit design
  - → Digital and Analog
  - → ARM Cortex-M, Cortex-A
  - → 8051 and derivatives
- PCB layout
- Prototyping
- Production

Software

- Architecture and Design
  - → Software Design with modern approaches
  - → OOP Object Oriented Programming
  - → Definition of Design Pattern
- Implementation
  - → Use of state of the art Toolchains
  - → C-Compiler, RTOS, Debugger
- Testing
  - → Test specification/ Choice of test tools
  - → Reviews
  - → Function test/module test

TRAINING AND COACHING

- Basics and practice proven know-how, for beginners and advanced developers.
- Partnership teamwork and integration with your development team.
- Coaching customized to your project by means of a situation analysis.
- Optimal transfer of knowledge at team level.

EMBEDDED SYSTEMS

- ARM Cortex-M, Cortex-A Basics
- Keil Tools Basics
- Embedded Realtime Systems – Basics
- Embedded Programming
  - → C/C++, Assembler
  - → Debugging
  - → Definition of Design Pattern
- Embedded Operating Systems (RTOS)
- Embedded Linux

FIELDBUSES

- CAN - Basics
- CANopen
- DeviceNet
- J1939
- Profibus - Profinet
- Modbus – Modbus/TCP
- EtherCAT
- TCP/IP

Tecnologix, for over 25 years, offers its customers the best professional solutions for the development and implementation of embedded and automation systems.

In a world that is rapidly changing, the products we offer, supported by the experience of our team of engineers, enable developers to achieve their goals in extremely short times and tackle with extreme tranquillity the simplest projects or the most complex technological challenges, from the small automatic control to the development of products with Intrinsic Functional Safety.

Our wealth of experience, developed over the years, is available for training courses, support and consultancy.

We have divided our product portfolio into five service classes:

DEVELOPMENT TOOLS, DEBUGGERS

MIDDLEWARE, GUI, SOFTWARE LIBRARIES

FUNCTIONAL SAFETY

INDUSTRIAL COMMUNICATION

INDUSTRIAL AUTOMATION

arm KEIL

Development Tool and Debugger

⊕ Arm® Keil® MDK is a collection of software tools for developing embedded applications based on Arm Cortex®-M and Ethos™-U processors.

⊕ Built on development flows created by Arm and our ecosystem, it gives you the flexibility to develop your software in the Visual Studio Code IDE or on the command line, across all major operating systems.

Middleware and Software Components

⊕ Software packs contain device and board support, software components, middleware, code templates, and example projects.

⊕ The IDEs and CLI tools manage the software components that are available for the application as building blocks.

Tools and Libraries for Functional Safety

⊕ MDK Professional includes FuSa components qualified by TUV Sud
→ Arm Compiler for Embedded FuSa
→ Arm FuSa C library
→ The FuSa RTS functional safety run-time system (www.arm.com/fusa-rts)

⊕ FuSa components are qualified for development of software that meets the highest level of safety integrity for the following standards:
→ Automotive ISO26262, ASIL D
→ Industrial IEC61508, SIL 3
→ Railway EN50128, SIL 4
→ Medical IEC62304, Class C

PYRAMID SOLUTIONS

NetStaX™ EtherNet/IP connectvity

⊕ Bring products to market faster

⊕ NetStaX™ development kits and tools offer proven solutions for embedded connectivity to EtherNet/IP networks.

⊕ Our flexible tools do the heavy lifting to help you confidently get your products to market faster.

⊕ Easily test and verify protocol functionality and conformance with NetStaX™.

EtherNet/IP Stack source code kits

⊕ ESDK
EtherNet/IP Scanner Developers Kit

⊕ EADK
EtherNet/IP Adapter Developers Kit

EtherNet/IP Stack DLL Kits

⊕ EIPS
EtherNet/IP Scanner DLL Kit

⊕ EIPA
EtherNet/IP Adapter DLL Kit

Test Tools & Executables

⊕ EDITT
EtherNet/IP Device Interoperability Test Tool

⊕ EIPScan
EtherNet/IP Scanner Simulator Tool

keil.arm.com

pyramidsolutions.com

Partners and Products

Ixxat BY HMS NETWORKS

Hardware for Industrial Communication
- ⊕ CAN bus PC Interfaces
- ⊕ Protocol Gateways
- ⊕ Repeaters, Bridges, Network Topology components

Diagnostic Tools
- ⊕ canAnalyser
- ⊕ CANcheck
- ⊕ Diagnostic Tools for CAN bus

Hardware for Functional Safety
- ⊕ Ixxat Safe T100 safe IO module

Firmware Libraries for Functional Safety
- ⊕ Ixxat Safety protocol stacks
- ⊕ CIP Safety Stack
- ⊕ FSoE Stack

CSS ELECTRONICS

Data logger and Diagnostic
- ⊕ Easily log CAN data from your vehicle/machine
- ⊕ Configure devices via simple GUI editors
- ⊕ Configure filters, silent mode, encryption, cyclic logging, triggers, transmit lists & more
- ⊕ Record high speed CAN/CAN FD - incl. J1939, FMS, OBD2, CANopen, NME
- ⊕ Log to 8-32 GB SD - no pc required. 100% power safe
- ⊕ Auto-push data to your server/cloud via HTTP(S). Over-the-air config/FW updates, extract data via SD or WiFi
- ⊕ Convert CAN data to CSV, Vector ASC or PEAK TRC, DBC decode to physical values and plot
- ⊕ Process the interoperable data in your favorite tools or via 100% free open source software/APIs, visualize in customizable browser dashboards
- ⊕ Manage your CANedge2 IoT devices & data remotely
- ⊕ Perfect for vehicle telematics

SEGGER

Development Tool and Debugger
- ⊕ Segger Embedded Studio
- ⊕ Streamlined and powerful C/C++ IDE (Integrated Development Environment) for ARM & RISC-V microcontrollers
- ⊕ Cross platform—Windows, macOS and Linux support
- ⊕ Pre-built C/C++ Compiler, GCC and LLVM included for an immediate start
- ⊕ ANSI/ISO C compliant C library for embedded systems
- ⊕ Feature-packed Debugger with seamless J-Link integration

Hardware Debuggers
- ⊕ J-Link/J-Trace - J-Tag USB emulators

Graphics and Middleware
- ⊕ emWin - ANSI C GUI Universal graphic library
- ⊕ embOS - Small and efficient real-time kernel with TCP/IP extensions
- ⊕ emFile - FAT12, FAT16, FAT32 File System
- ⊕ emNet - high performance, CPU independent TCP/IP stack
- ⊕ emLoad - Software for Program Updates in Embedded Applications
- ⊕ emUSB - USB Device stack
- ⊕ emSecure - secure digital assets authentication
- ⊕ emCrypt - state-of-the-art cryptographic algorithm library that scales from constrained devices to workstations

Safety
- ⊕ embOS-Safe - Certified real-time operating system (RTOS) embOS according to IEC 61508 SIL 3 and IEC 62304 Class C

RT-LABS MAKE YOUR PRODUCT COMMUNICATE

Firmware Libraries for Industrial Communication
- ⊕ Embedded ANSI C libraries
  - → CANopen
  - → PROFINET
  - → EtherNet/IP
  - → EtherCAT - FSoE
  - → IO-Link
  - → CC-Link
- ⊕ Well suited for Embedded Systems with small resources
- ⊕ Provide all required services for a compliant communication according to the Standards
- ⊕ Facilitate easy and fast development of connected devices
- ⊕ Scalable protocol functionalities: functional range can be extended by additional modules

U-PHY (Multi Protocol Platform)
- ⊕ Multi-Protocol software platform for Industrial Communication
- ⊕ Pre-qualified firmware with deterministic performance
  - → PROFINET
  - → EtherNet/IP
  - → EtherCAT
  - → Modbus TCP

U-Phy Device Builder
- ⊕ For rapid and costsaving development of devices
- ⊕ Administers device databases, produces Object Dictionary, Electronic Data Sheet and documentation
- ⊕ Simplifies configuration of U-PHY based devices

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ixxat.com

csselectronics.com

segger.de

rt-labs.com

WARWICK CONTROL TECHNOLOGIES

J1939 Protocol

J1939 Protocol Stack Kit
- ⊕ J1939 protocol stack (C code) including support for the Extended Transport Protocol
- ⊕ Example HAL reference design (C code)
- ⊕ ISO-TP and UDS option available

LIN Protocol

LIN Protocol Stack Kit
- ⊕ LIN protocol stack (C code) – LIN versions 1.x and 2.x
- ⊕ Example HAL reference design as a LIN Master

NMEA2000 Protocol
- ⊕ Protocol stack (C code)
- ⊕ Example HAL reference design (C code)
- ⊕ Protocol stack and example application
- ⊕ For NMEA2000 product certification testing, the stack reference design will pass with the current test tool out of the box. This means that once you have made your application changes, less work will be required to get your device to pass the NMEA2000 Product Certification
- ⊕ A diagnostic stack (UDS-light option) is available for vehicle based application with a basic ISO-TP and basic offering of UDS services

SYS TEC ELECTRONIC

CPU Embedded Modules
- ⊕ OS Level programmable modules
- ⊕ IEC 61131-3 programmable Modules
- ⊕ VHDL programmable Modules

Automation Components
- ⊕ CANopen IEC 61131-3 Controllers
- ⊕ CANopen I/O Modules
- ⊕ Development and Configuration Tools

Firmware Libraries for Industrial Communication
- ⊕ CANopen ANSI C protocol stack
- ⊕ CANopen Tools
- ⊕ Ethernet POWERLINK
- ⊕ OpenPOWERLINK
- ⊕ OpenPOWERLINK Linux Starter Kit
- ⊕ OpenPOWERLINK Workshop

Embedded Wizard

Powerful GUI for Embedded Development

Lean
- ⊕ Low memory footprint
  - → High-efficient ANSI-C source code generation
  - → Object-oriented programming
  - → One code base for multiple platform

Versatile
- ⊕ Suitable for various markets
  - → Professional services from our experts
  - → Simple handling of themes, layouts, resolutions
  - → User testing with PC, web or native mobile apps

Scalable
- ⊕ Any platform (MCU to MPU)
  - → Variety of color formats
  - → Bare metal or any (RT)OS
  - → Any graphics API

Fast
- ⊕ WYSIWYG Editor
  - → Instant prototyping and debugging
  - → Ready-2-use and fully customizable widgets
  - → Best utilization of HW graphics acceleration

acontis technologies

EtherCAT Master Stack
- ⊕ Leading product in EtherCAT Industrial Communications
- ⊕ High quality and rich amount of functionality, full compliance with the EtherCAT standards and inter-operability with all available EtherCAT slave devices
- ⊕ EC-Engineer: EtherCAT configuration and diagnosis tool, which also can be integrated into customer's application

Windows Realtime Hypervisor
- ⊕ LxWin Hypervisor to run Windows and a hard real-time Linux in parallel
- ⊕ Plenty of Linux drivers, e.g. for fieldbus controllers or GigE camera systems
- ⊕ Communication stacks (EtherCAT, Profinet, OPC, OPC UA, TSN,...) or complex software solutions like CNC controller or software PLCs can be used without any change under LxWin
- ⊕ Seamless Microsoft Visual Studio integration

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warwickcontrol.com   **systec-electronic.com**   **embedded-wizard.de**   **acontis.com**

Memberships

ARM ACCREDITED ENGINEER

CiA member

EtherCAT. Technology Group

CERTIFIED TECHNICAL SPECIALIST
arm KEIL

PARTNER OF
arm Community

ST Authorized Partner

PI Italia
PROFIBUS • PROFINET

Quality

IQNET RECOGNIZED CERTIFICATION

IMQ CERTIFIED
QUALITY MANAGEMENT SYSTEM
ISO 9001:2015

Our commitment to achieving "Total Quality" is ably demonstrated through the international certification that we have achieved.

ISO 9001:2015 is both a guarantee for our customers as well as a tool within the company to continuously monitor compliance and effectiveness of products and services.

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