

**HYDAC INTERNATIONAL**

**Mobile Electronics  
and Controls**



***TI Control***  
HYDAC INTERNATIONAL



Safe I/O Modules & CANopen® Slaves

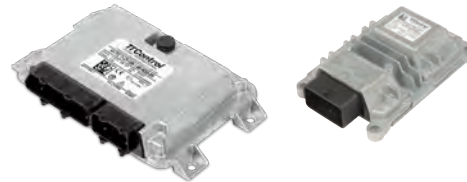
General Purpose ECUs

Safety ECUs

- IP69k rated enclosure
- Open Source Programming
- C with SAFERTOS® Integration
- ISOBUS standard compliant
- Safety Certified

## Controllers

## I/O Expansion



## Sensors



- Pressure
- Temperature
- Inclination
- Angle
- Linear Position
- Fluid Level



Vision 305s



HY-eVision²7.0



HY-eVision²10.4



Vision 312

## Displays

- ISOBUS-compliant CAN interfaces
- Ethernet (Standard or BroadR-Reach®)
- Show up to 4 simultaneous video streams
- Excellent sunlight readability
- Integrated loudspeaker

## Connectivity



**TTC-WAVE Telematics System** connects our customers via a web portal to their mobile machinery. Using the Cloud Service and the ruggedized IoT gateway TTConnect WAVE, off-highway vehicles can be monitored and managed around the world. Remote access to all data available on the vehicle's CAN buses allows for system monitoring, fleet maintenance, theft protection and the optimization of future machine design.

Our connectivity platform **TTConnect**, **In-Vehicle Ethernet** interface is designed for the management of ethernet networks in vehicles and machines in rugged operating environments. It combines and manages all in-vehicle interfaces such as BroadR-Reach, CAN-FD, lin and a 100BaseTX Ethernet for diagnostics and flashing.

# puts you in control...

## Certified **SAFETY**

### **Safety Hardware**

sensors – controllers – I/O modules

### **Safety Software**

safety certified core programming

### **Safety Training**

learn to design SAFE machines



**Harnesses**

**Break-out Box**



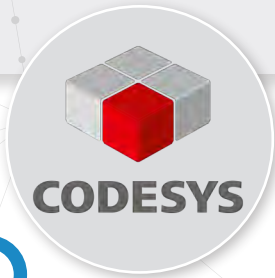
**Developer Kits**



**Data Collection**



[www.HYDAC-NA.com](http://www.HYDAC-NA.com) | [support.electronics@hydacusa.com](mailto:support.electronics@hydacusa.com)



**CoDeSys (Controller Development System)** has been freely available since 1994 and is a development environment for programming control units according to IEC 61131-3.

- Three graphical languages (function block diagram, ladder diagram and sequential function chart)
- Two text-based languages (structured text and instruction list) for programming the programmable memory control.
- CODESYS stands out primarily for its simplicity and ease of use.



**C** (developed in 1972) and **C++** (developed in 1979) may be two of the oldest classic programming languages in IT, but they are still in widespread use to this day.

- State-of-the-art in terms of achievable performance and flexibility.
- High performance speed and low memory requirements.
- C / C++ is also used for applications with high performance requirements and systems with limited resources, such as cost-optimized series devices.



**MATCH (Machine Application Tool Chain)** by HYDAC is a tool chain which offers a holistic solution to the software development.

- All safety-relevant modules are TUV Certified.
- Development according to the V-Model, testing included.
- Documentation components are generated automatically.



**Qt** is a cross-platform development, framework for desktop, embedded and mobile applications.

- Integrated Help System
- Intelligent code completion
- Profiler integration
- Syntax highlighting
- Debugger & integration for all major version control systems

# Flexible Open-Source Programming

# 1-WEEK!

**Do YOU want to learn how to program your own controller?**



You don't need to be a software engineer to program your TTC controller. Let us show you how to do it – it is simpler than you think.

Training is friendly, flexible, and FREE!

Don't get trapped learning to program a **'proprietary'** language, that can only be used in one brand of controller. Let us show you how to program your TTC controller with industry standard languages (C, and CODESYS). Don't settle for a "90-Day Free Trial", get programming software that is actually FREE forever.

Ask us about how you could even get FREE 'evaluation software' for your simpler machine or let us show you how you could save 70% of the cost of programming larger, more complex machines with our very own MATCH Programming Tools.

HYDAC and TTControl, want to help you get the most out of your time and money. Turn the page to find out more about our software options!

## MISSION STATEMENT

HYDAC designs and manufactures a comprehensive line of innovative, reliable hydraulic, electronic, control and fluid conditioning solutions optimized for mobile, industrial and process applications. Our passionate and talented team accomplish this by leveraging our product and application expertise while collaborating with our customers to develop innovative solutions that solve their challenges and increase the value to their end customers. Our global presence coupled with local competence give us the agility to provide a superior customer experience.

## HYDAC INTERNATIONAL-TTCONTROL

TTControl, a joint-venture company of **HYDAC International** and **TTTech** offers control systems and operator interfaces for mobile machinery and off-highway vehicles. Being leaders in functional safety, TTControl's software and hardware platforms enable equipment manufacturers to develop highly reliable electronic control systems and operator interfaces for Safe Automation of mobile machinery and off highway vehicles.

### Products we offer:

- Displays
- Controllers
- Sensors
- Software & Development Tools
- Proportional Valves
- Electro-hydraulics
- Integrated systems

Wherever off-highway vehicles are at work, so is HYDAC Technology. We offer you expert worldwide support for ensuring the best possible solutions for outstanding performance. And with an extensive network of Global Service Partners, we also provide you with comprehensive global service for all of our components.

Go to [www.hydac-na.com](http://www.hydac-na.com) for further product information.



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