HYDAC INTERNATIONAL

Mobile Electronics and Controls
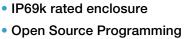
municipal

construction

agriculture

material handling

mobile robots

Control
Solutions

special vehicles

TTControl
HYDAC INTERNATIONAL

HYDAC

TTControl
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Controllers

Safe I/O Modules
& CANopen® Slaves

General Purpose ECUs

Safety ECUs

I/O Expansion

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

Displays

Sensors

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

Vision 305s   HY-eVision²7.0   HY-eVision²10.4   Vision 312

- 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.

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HYDAC

puts you in control...

Certified
SAFETY

Delivering
Solutions

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

LEARN MORE

www.HYDAC-NA.com | support.electronics@hydacusa.com

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CoDeSys (**C**ontroller **D**evelopment **S**ystem) 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 (**M**achine **A**pplication **T**ool **C**hain) 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.
- Robust, hardware-independent, and easily portable.

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 for further product information.

HYDAC INTERNATIONAL

North America Locations

USA
www.HYDAC-NA.com

North America Headquarters
HYDAC TECHNOLOGY CORPORATION
Filter Division
2260 City Line Road
Bethlehem, PA 18017
+1.610.266.0100

HYDAC TECHNOLOGY CORPORATION
Filter System Division
Process Filter Division
Fuel Filtration Division
580 West Park Road
Leetsdale, PA 15056
+1.724.318.1100

HYDAC TECHNOLOGY CORPORATION
Cooling System Division
1051 Airlie Parkway
Denver, NC 28037
+1.610.266.0100

HYDAC TECHNOLOGY CORPORATION
HYDAC CORPORATION
Sales Office & Operations
510 Stonegate Drive
Katy, TX 77494
+1.281.579.8100

HYDAC TECHNOLOGY CORPORATION
HYDAC CORPORATION
SE Sales Office
1051 Airlie Parkway
Denver, NC 28037
+1.610.266.0100

HYDAC TECHNOLOGY CORPORATION
Electronic Division
Process Filter Division

HYDAC CORPORATION
Accumulator Division
90 Southland Drive
Bethlehem, PA 18017
+1.610.266.0100

HYDAC TECHNOLOGY CORPORATION
Hydraulic Division –
Compact Hydraulics
450 / 445 Windy Point Drive
Glendale Heights, IL 60139
+1.630.545.0800

HYDAC TECHNOLOGY CORPORATION
Mobile Hydraulic Division
4265 East Lincoln Way • Bldg. C
Wooster, OH 44691
+1.610.266.0100

HYDAC TECHNOLOGY CORPORATION
HYDAC CORPORATION
NW Sales Office & Operations
1201 NE 144th St. Bldg. B • Suite 111
Vancouver, WA 98685
+1.610.266.0100

HYDAC TECHNOLOGY CORPORATION
HYDAC CORPORATION
NC Sales Office
9415 West Forest Home Ave. • Suite 200
Hales Corners, WI 53130
+1.610.266.0100

HYDAC TECHNOLOGY CORPORATION
Accessory Division
2204 Avenue C
Bethlehem, PA 18017
+1.610.266.0100

HYDAC TECHNOLOGY CORPORATION
Hydraulic Division – Tech Center
430 Windy Point Drive
Glendale Heights, IL 60139
+1.630.545.0800

HYDAC CYLINDERS LLC
540 Carson Road North
Birmingham, AL 35217
+1.205.520.1220

HYDAC TECHNOLOGY CORPORATION
HYDAC CORPORATION
NE Sales Office
4265 East Lincoln Way • Bldg. C
Wooster, OH 44691
+1.610.266.0100

Canada
www.HYDAC-NA.com

HYDAC CORPORATION
14 Federal Road
Welland, Ontario, Canada L3B 3P2
+1.905.714.9322

HYDAC CORPORATION
Sales Office
5160 75 Street NW
Edmonton, Alberta, Canada T6E 6W2
+1.780.484.4228

HYDAC CORPORATION
Sales Office
Montreal, Québec, Canada J2M 1K9
+1.877.539.3388

Mexico
www.HYDACmex.com

HYDAC INTERNATIONAL SA de CV
Calle Alfredo A Nobel No 35
Col Puente de Vigas
Tlalnepantla, Edo Mexico
CP 54090
Mexico
+011.52.55.4777.1262

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HYDAC INTERNATIONAL

www.HYDAC-NA.com | www.HYDAC.com