# **QIIO4** the next generation PLC



#### How to find us:

qmd4 is located in Imbach near Krems. The city of Krems is in the center of Lower Austria about 80 km to the west of Vienna. You can reach us by plane (via Vienna airport). Then drive by car or train in the direction of Krems. As an alternative you can easily reach us by train or car from Vienna or Linz within an hour.

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### Browser-Based Engineering

Generic Field Bus and System Configuration, IEC 61131 and HMI/Visualization

#### q4PLC

Currently supported CPU families: • ARM Cortex M3 and M4 (little endian) • generic ARM, e.g., Cortex A9 (little endian) • Intel x86 and x64 (little endian) • PowerPC (big endian)

Currently supported operation systems: • Linux • MQX • OS-9 • VxWorks • Windows, 32 Bit and 64 Bit

- Windows Embedded Compact

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#### q4Logix

q4Logix is designed for high-level programming based on systemblocks programmed in function block language provided by the device or system supplier. Such system-blocks can be written in C or assembly programming language. Furthermore, a wide range of predefined libraries, e.g. according toIEC61131, are provided by qmd4.

For troubleshooting, an integrated online-debugger is available, which of course also runs in the web browser. The debugger shows the current values of the variables and allows to modify them on the run for testing purposes. A trend control to directly display multiple values over time in the function plan is available. Short turnaround cycles below 1s for the code generation and program reload supporting a convenient program debugging and development process.

The configuration and parameterization of networks and fieldbus, devices are based on a model-based project framework. A data model for the configuration of EtherCAT-bus is available off the shelf.

In the "professional" version, the development of own function blocks and functions in FBD (function block diagram) or ST (structured text) is available, too.

#### q4Viz

Mit With q4Viz you can develop a specific user interface for your device (machine, plant). On different layers, current values of multiple variables can be displayed clearly and appealingly. Manifold scopes for design with images, dynamic value controls or interactive elements allow the development of individual interactive user interfaces.

Specific libraries, e.g. for building automation or machine elements are already available from qmd4. The editor and the runtime run in the user's favourite web browser and on all most available panel computers, fully independent of the operating system.

#### q4Ethercat

q4EtherCAT is an independent model framework for configuration and parameterization of different EtherCAT-fieldbus devices. In offline mode a XML configuration file can be created, saved and later on transferred into the master system.

Being a pure HTML5 solution, q4EtherCAT can run fully independent from selected devices on Windows-PC, Linuxworkstation or on Apple computers as well as on any tablet or smartphone device. Even on standard panels (also with ARM or PowerPC core(s)) the configurator can be used.

The open and expandable database allows to add own devices (new EtherCAT master and slave components).



## Programming & Visualization in the Web Browser

environments and visualizations running in the user's favourite web browser. To use these IDEs, no software installation is needed. Thus each internet device can be turned into a control unit and a program editor. That means a huge selection of different devices with different operating systems is available, and makes "Run anywhere – run everywhere" being no longer just a fiction.

q4Logix and q4Viz are client/server applications whose communication is based on proven industry standards and utilizes secure protocols

like https or secure WebSockets. Our software runs in the user's web browser and only needs a small communication bandwidth with the web server or the PLC. That means operation in the field with mobile or bad network connection will not harm using the application.

Web Server • qmd4 Server • own Server • directly on the PLC

#### Integrated Framework

The basis for q4Logix and q4Viz is a model-based framework. Rulebased data modelling allows both, a context-sensitive configuration of project structures, different fieldbus- or network-topologies as well as configuration and parameterization of nodes in the model (network). The framework as well as the IEC 61131-3 editor and the visualization run-time (q4Logix, q4Viz and q4EtherCAT) can easily be adapted to your desired look&feel (OEM style).