

PC-based Control 2.0

New freedoms for automation with DACHSview!

Via mouse click: unlimited use of all PC-resources in real time
LUA and C++ applications, such as Qt, are processed in DACHSview by calling special DACHSview function blocks.



RELIABLE | INNOVATIVE | EXCELLENT PRICE/PERFORMANCE | OEM SOLUTIONS
MODULAR | FLEXIBLE | MISSION CRITICAL USE | CONSULTING | ENGINEERING

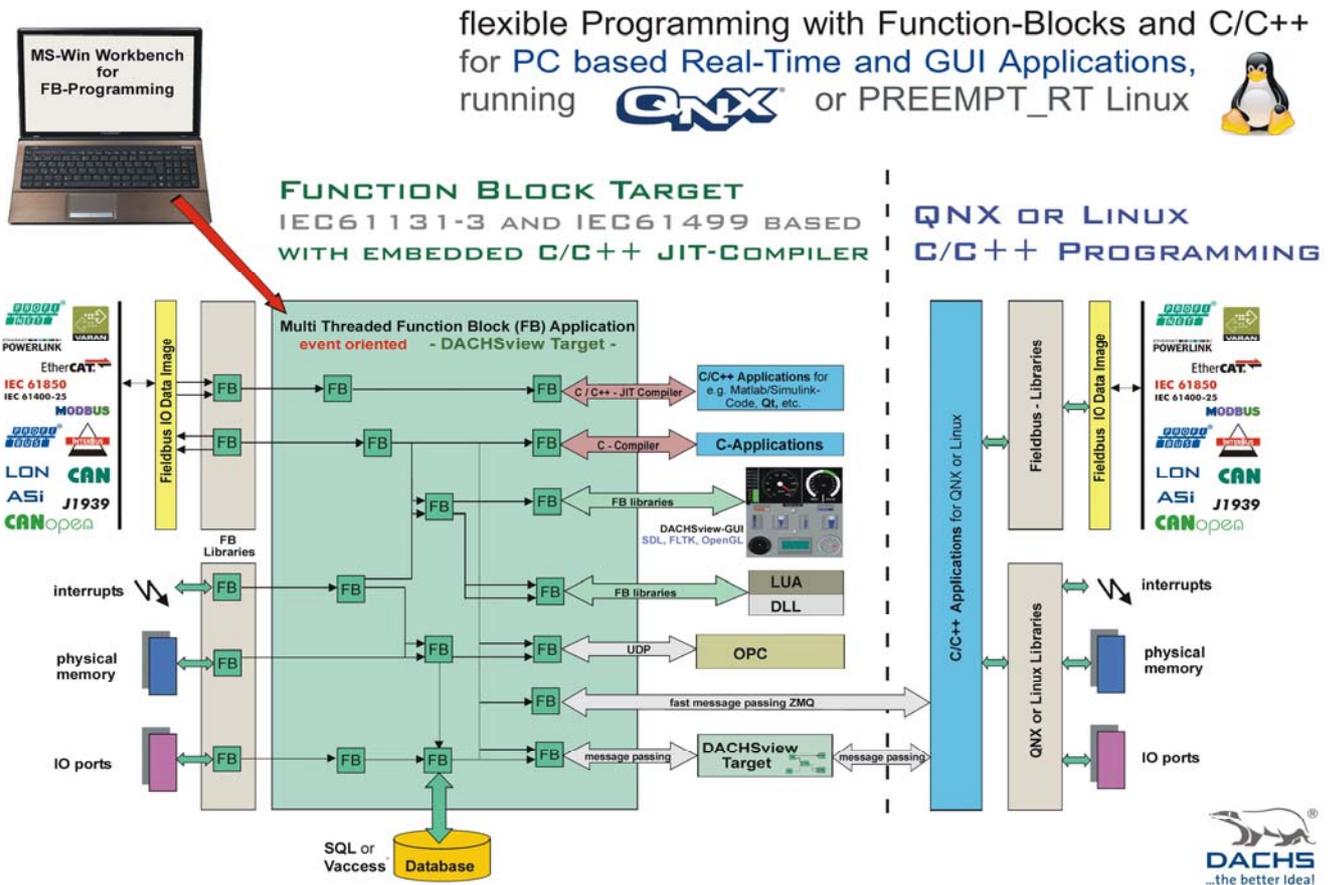
DACHSview++ for x86 and ARMv7 Targets

THE INNOVATIVE PROGRAMMING IDE WITH ITS REMOTE SOFT-PLC TARGET SYSTEM IS COMBINING THE 2 WORLDS OF FUNCTION BLOCK- & C/C++ - PROGRAMMING

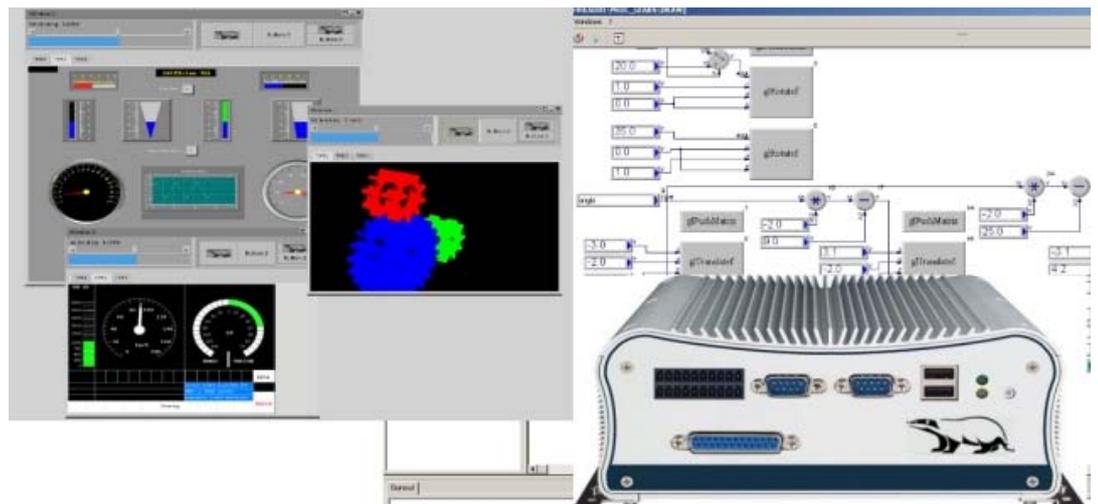
An **embedded JIT C/C++ compiler** allows the usage of C/C++ code of Qt, Matlab/Simulink, mathematical and scientific libraries etc. as executable code of function blocks.

DACHSview++ comes with a function block oriented **uniform programming environment** which supports access to shared-memory, I/O ports, interrupts, graphics, and fast message-passing for interprocess communication.

further Features: www.dachs.info/DACHSview++_E.pdf | www.dachs.info/Dview++.htm



Demo applications with real-time-Targets under PREEMPT_RT Linux or QNX 6.x



DACHSVIEW++ is based on a graphical function block language for event oriented processing on remote target systems in real-time, and is covering all aspects of today's industrial automation. It's the answer on increasing complexity and rising development costs for real-time applications in industrial automation.

DACHSVIEW++ comes with Function Block Libraries for:

OS SERVICES

- **Message passing, semaphores, shared memory, interrupts, buffer handling** and other basic functions

GRAPHICS

- **2D graphics:** calls of the libraries SDL and SDL-Gfx, TinySDGL, SDL_ttf, and FLTK as pre-defined function blocks (FBs) incl. higher level FBs for easy handling of complex visualization tasks
- **3D graphics:** OpenGL (SDGL)
- **FLTK for standard GUI elements:** GUI buttons, control- and input-elements, etc.
- **International fonts:** TTF support

PROGRAMMING LANGUAGES

- **Embedded C- and C/C++ - JIT-Compilers** for integrating **Qt, Matlab/Simulink Code,** mathematical and scientific libraries, etc.
- Support of **scripting language LUA**
- Support of **dynamic link libraries**



DATA BASE

- **SQL, historical data base:** SQLite for processing mass data or for SCADA requirements

FIELDBUS SYSTEMS, Options

- **Fieldbuses** - for processing I/O-data with PROFINET, Ethernet POWERLINK, EtherCAT, CAN, CANopen, Modbus, PROFIBUS-DP, INTERBUS, VARAN , IEC 61850/ 61400-25, etc.



ADDITIONAL INTERFACES, Options

- **OPC and TCP/IP-based middleware** (ZeroMQ e.g.)

USER-DEFINED and CUSTOMIZED FUNCTION BLOCKS

- Users can build also own function blocks
- C-APIs from customers can be converted in Function Block Libraries for DACHSview on request

SECURITY: drivers and targets are resistant against viruses by CRC checksum protection!

Support of scripting language LUA

LUA www.lua.org is an object oriented, lean, and fast scripting language and is well suited for embedded systems. LUA scripts can be called in DACHSview applications. A lot of interesting third party applications and libraries are offered for LUA at www.luaforge.org .

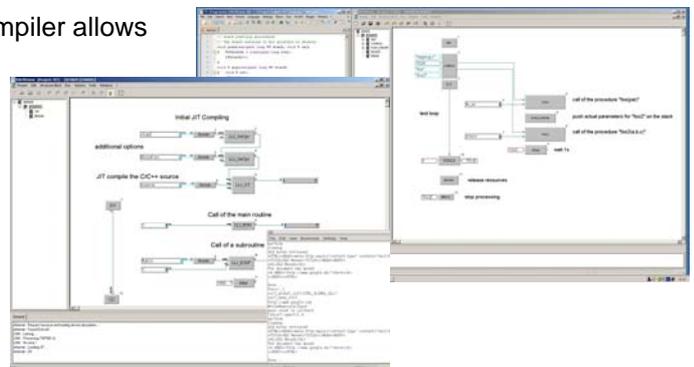
ANSI C-Code and C/C++ compile “on the fly” in a DACHSview++ application!

An enhancement of DACHSview by an embedded C-compiler allows compiling **ANSI C-Code** “on the fly”.

Further is integrated an embedded C/C++ Compiler which allows **JIT compiling** (just-in-time) of **C++ Code**.

It offers the usage of Qt-based applications, integrating mathematical and scientific libraries, Matlab/Simulink Code, etc. within DACHSview++ !

The resulting binary codes of the embedded C- or C/C++ Compilers are called up within user-defined function blocks as its function block code.



Compiling on the fly with an embedded ANSI C- or C++ Compiler

Support of Dynamic Link Libraries

is also added. It provides e.g. access to code of scientific libraries in a very flexible way without integrating a function block API, or modifying the Target.

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DACHSview

... and complex systems get simple,
means rapid time to market!

PC-based Control 2.0 in Real Time

DACHSview

Function Block Programming

Dynamically extendable: DLL-Support
Embedded C- and C/C++-Compilers

Fieldbuses (Master/Slave)

Graphic Applications · SQL-DB

High-Speed **SCADA Vsystem**[®]

Multicore · PC-Hardware · Multitarget

 **PREEMPT_RT Linux**  Embedded Systems

CAN

CANopen

PROFI BUS

PROFI NET

IEC 61850
IEC 61400-25


VARAN

ETHERNET 
POWERLINK

Ether**CAT**

MODBUS


INTERBUS

MACHINE CONTROL | ROBOTICS | MATERIAL FLOW | TRAFFIC CONTROL | TEST STANDS
MEDICAL ENGINEERING | MANUFACTURING | POWER SYSTEMS | PROCESS CONTROL

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