

DACHSview with embedded C/C++ JIT Compiler

PC-based Control 2.0 in Real Time

DACHSVIEW
Function Block Programming

- Dynamically extendable: DLL-Support
- Embedded C- and C++ Compiler**
- Fieldbuses (Master/Slave)
- Graphic Applications - SQL-DB
- High-Speed **SCADA VSYSTEM®**
- Multicore - PC-Hardware - Multitarget

PREEMPT_RT Linux QNX Embedded Systems

CAN

CANopen

PROFI

NET

IEC 61850
IEC 61400-25

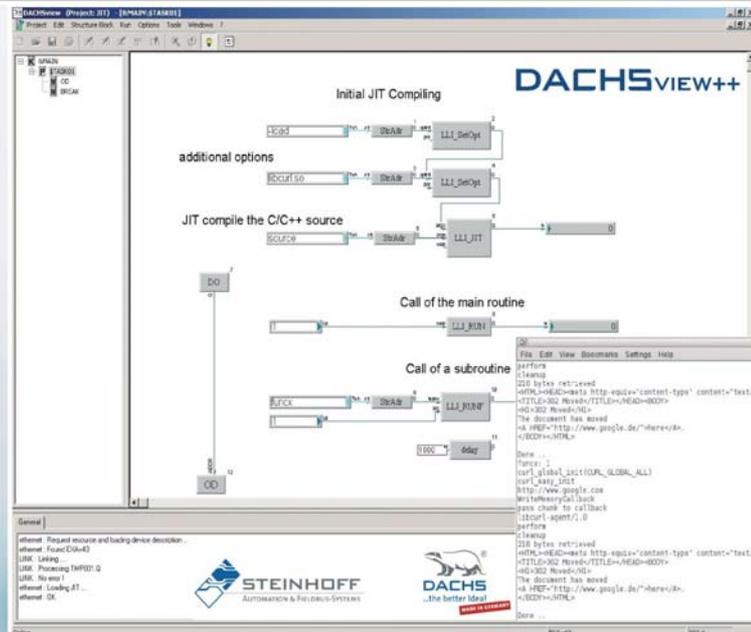
VARAN

ETHERCAT
POWERLINK

EtherCAT

MODBUS

INTERBUS



The screenshot shows the DACHSview++ software interface. The main window displays a control logic diagram with various function blocks and connections. A sub-window titled 'Initial JIT Compiling' shows the compilation process, including 'additional options', 'JIT compile the C/C++ source', 'Call of the main routine', and 'Call of a subroutine'. The bottom of the interface features a code editor with Lua-like syntax and a status bar with the Steinhoff and Dachs logos.

DACHSview++ Real-Time - Applications can mix up C/C++- and Functionblock Programming

STEINHOFF Automation & Fieldbus-Systems offers now the latest version of the functionblock-based programming tool DACHSview++ which contains a functionblock library for the full integration of C/C++ code via an embedded JIT Compiler. The compiled code is linked directly into the memory and can be called within functionblocks. It means control algorithms are running at optimal speed, as well as arbitrary C/C++ code can be imported. At start time of the functionblock application, the machine code for execution in functionblocks is generated just-in-time within milliseconds.

The full standard of the C/C++ language is supported, there are nearly no restrictions on the takeover of the C/C++ code for the execution within the **DACHSview++ Targets for x86 or ARMv7**, which are available for QNX and PREEMPT_RT Linux.

The arbitrary mixing of C/C++ code and statically defined functionblocks of libraries gives a new flexibility for the implementation of control and real-time applications. Project teams for demanding real-time applications can even work very effective with only one C/C++ developer in the team when the other team members are developing on the abstraction level of functionblocks.

The standard version of DACHSview++ comes with functionblock libraries for embedded C- and C/C++ -compilers as well as functionblock libraries for 2D and 3D graphics, standard GUI elements, TTF support, a SQL database, and the message-passing-based middleware ZeroMQ. Support of Dynamic Link Libraries and the scripting language LUA is included.

Additional offered options are functionblock libraries for many fieldbuses, and an interface for OPC. A functionblock library for the high performance real-time SCADA-database Vaccess® for DACHSview-Vsystem® is a special offering for SCADA customers from Vista Control Systems®.

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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.

The flyer features a central dandelion graphic surrounded by various logos and icons representing supported technologies and hardware, including IEC 61850, CAN, CANopen, PROFIBUS, EtherCAT, MODBUS, SCADA, Qt, and various Linux distributions like PREEMPT_RT Linux and QNX.

www.dachs.net/DACHSview++_E_flyer.pdf