Multi-platform Control System REX is compatible with Matlab-Simulink!

Key features:

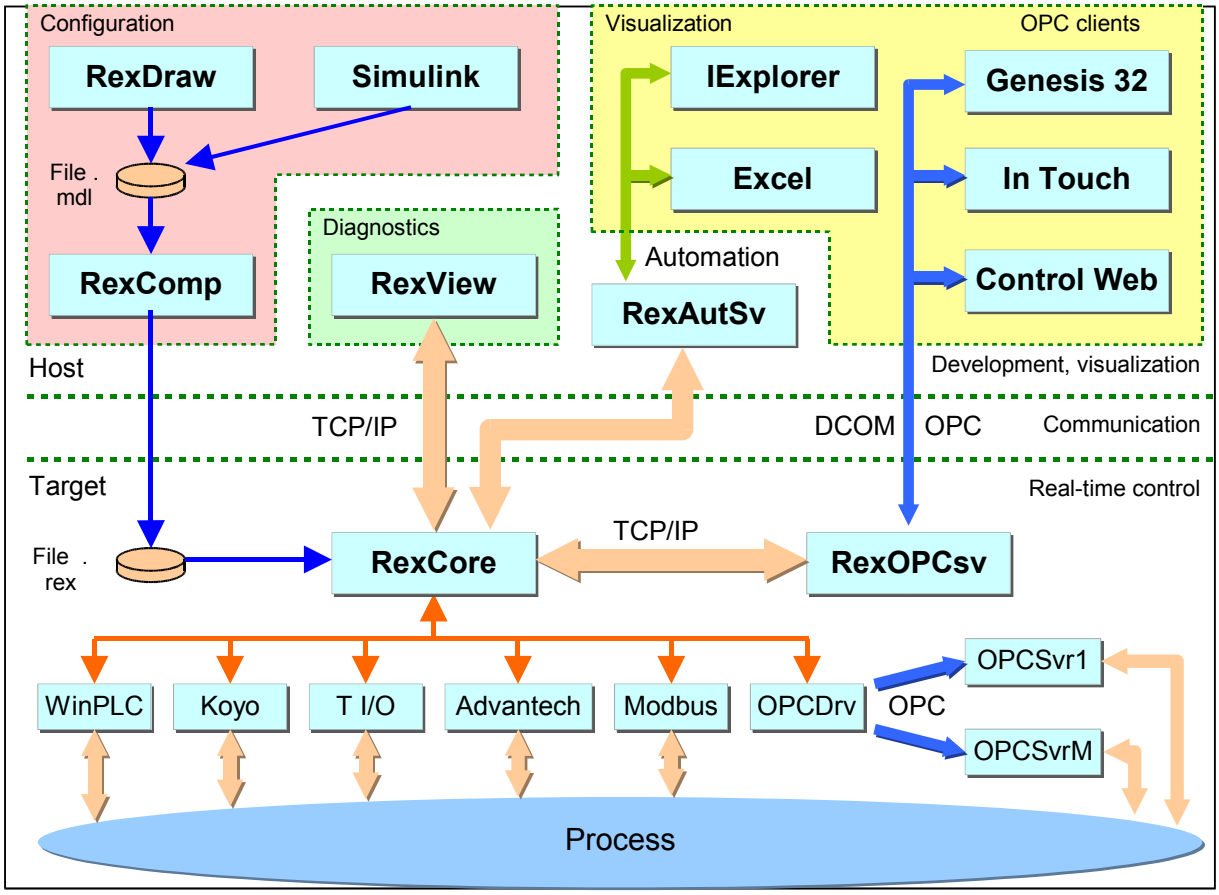
The compatibility with the globally spread simulation system Simulink is a main idea of the control system REX. This feature guarantees that all Simulink strengths of advanced control algorithm design are available for the user. However, Matlab-Simulink license is not necessary for advanced usage of REX. Implementation of standard OPC interface which enables the connection to all popular SCADA and HMI systems is another key feature of REX.

Supported platforms:

- PCs a IPCs (Industrial PCs) with Windows 95/98/ME/NT4/2000/XP, Phar Lap ETS and VenturCom RTX, National Instruments and Advantech boards, ethernet based Terminator I/O, etc.
- WinPLC equipped with DL205 series modules and Windows CE OS
- TECOMAT TC700 with Windows CE OS

Architecture:

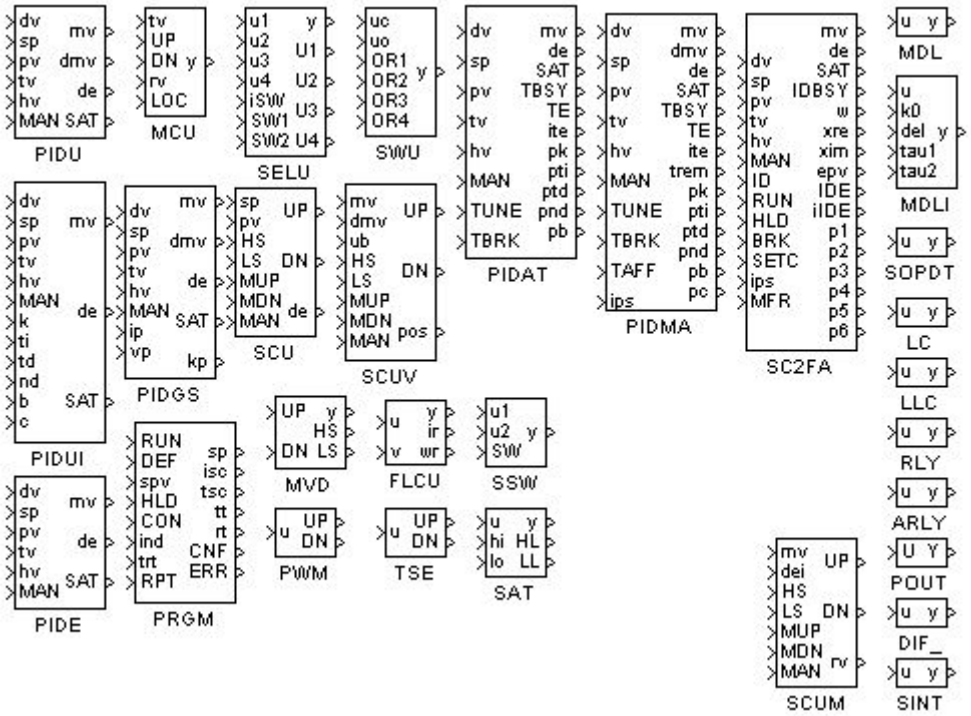
Architecture of the control system REX is depicted in following figure:



RexDraw	–	Graphic designer of REX algorithms and applications
RexComp	–	Application compiler to binary format files .rex
RexCore	–	Real-time control system core
RexOPCsv	–	OPC Data Access server 2.0 of the system REX

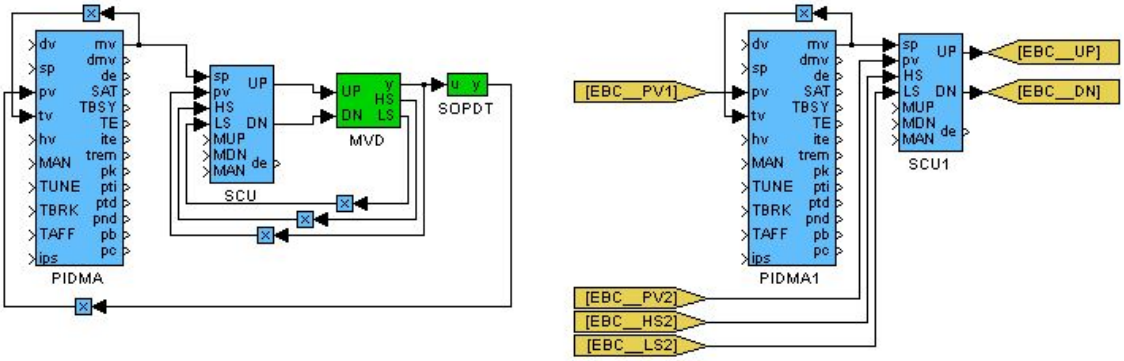
Function block library:

Control algorithms of REX are contained in a large function block library RexLib which includes more than 100 function blocks. The following picture presents one of RexLib sublibraries RegLib – blocks for process regulation. The most important block of RegLib are `PIDMA` (PID controller with built-in pulse autotuner), `SC2FA` (State Controller with automatic tuning of the parameters), `FLCU` (fuzzy logic controller), `PRGM` (set point programmer).



Configuration example:

The function block diagram below illustrates the configuration of a simple control loop with self-tuning PID controller `PIDMA` which controls a motorized valve using the stepping controller `SCU`. Simulink simulation configuration is on the left (blocks `MVD` and `SOPDT` models the motorized valve and the process). Real process control configuration using REX is on the right.



Contact:

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