Why choose ControlBuild™ Application Generator?

- Do you have projects that are late or over budget?
- Are you faced with tougher competition in your business sector?
- Are you looking for a global solution that will reduce your development costs, while improving quality?
- Do you need to validate your engineering studies all together (electrical control, pneumatics, hydraulic, PLC programs, HMI, SCADA) before implementation on the real plant or system?
- Are you looking for an open platform to standardize your development process?

If the answer to any of these questions is “Yes”, then ControlBuild Application Generator is the solution that meets your needs.

Key Advantages

ControlBuild Application Generator (AG) is a unique open platform designed to accelerate the development of control software applications while improving quality.

ControlBuild AG covers the entire software development cycle (specification, simulation, code development and testing) and the operation of automated systems (optimization and maintenance).

ControlBuild Application Generator is the solution for:
- designing at reduced costs and schedule thanks to the validation methodology implemented from the start of the development cycle right through to the acceptance phase (incremental approach),
- distributing and generating control applications to major PLC platforms: Rockwell, Schneider, Siemens
- automatically producing the different project documents at any time,
- federating the different business teams on the basis of executable specifications,
- supporting the design of functionality and the IEC 61131-3 standard languages,
- making the most of know-how by reusing previous developments and IPs,
- managing industry standards and guidelines (IEC 61508, EN 50128, GAMP, etc.)

System Specification
Model-Based Design
Simulation-Based Validation
Multi PLCs code Generators
Integration & Acceptance Testing
Maintenance & Optimization
**Key Features**

- Graphical interactive editors for Model-Based Design: users can easily develop an executable model of their control system using multiple languages: IEC 61131-3, electrical schematics and C code.

- Component libraries: ControlBuild includes a structured set of component libraries: models of electro-mechanical objects, handling equipments with travel and detection rules, toolboxes, regulation filters, automatic control functions, etc.

- Simulation-based validation: a virtual prototype of the complete system (control and physical model of the system) allows the developer and their client to communicate as early as possible, and to validate the functional specifications by simulation.

- Graphical environment for virtual commissioning: the diagram, scenario and time stamped trace editors are used to prototype HMIs, the various graphical views of the project, and the test and acceptance procedures.

- Distribution of applications on hardware architectures: with ControlBuild you can configure the targets of the hardware architecture, allocate functions to those targets, configure communications networks, address I/Os on cards, and generate the code.

- Automatic code generation: ControlBuild supports the standard XML format as defined by PLCopen and includes code generators for majors PLCs providers (Schneider, Siemens, Rockwell) and a C code generator for PC-based controllers.

- Automatic generation of project documentation: a configurable document generator (logo, quality standard, document template, etc.) automates the production of the various documents required throughout a project (IEC 61508 and EN 50128 safety standards or CMMI quality standards, etc.)

- Integration tests / Test bench: before integration or installation on site, ControlBuild can check and calibrate the embedded applications in the PLCs (Emerson, Mitsubishi, Omron, Rockwell, Schneider, Siemens,…) or real-time controllers (Linux, Windows, VxWorks, QNX, …).

- Traceability of developments and requirements: in combination with Reqtify, ControlBuild provides requirement traceability to support certification processes (IEC 61508, EN 50128, etc.)

**Applications**

- Industrial and medical gases
- Automotive
- Food & beverage
- Intelligent Building
- Iron & Steel
- Logistics systems
- Power energy
- Shipbuilding
- Space & aeronautics
- Railway transportation
- Water treatment
- Chemical & pharmaceuticals

**References**

Actemium, Air Liquide, Alstom, Boasteel, Bombardier, Cegelec, Clemessy, CNR-Suez, DCNS, Degrémont-Suez, Dongfeng Motor, Dürr, EDF, Forclum, Goss International, Lilly, MSD Chibret, PSA, RATP, Schneider, Siemens, SNCF, Spie, Soreel, …