



EcoStruxure Control Expert

What's new in EcoStruxure Control Expert V14.1

EcoStruxure Control Expert v14.1: key objectives

Customer Challenge

Always looking for ways to speed-up engineering time

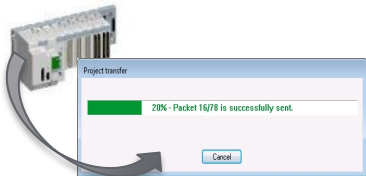
Our Value Proposition

Increase productivity during engineering, commissioning and operation, reducing time to market.

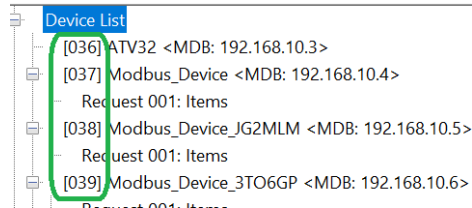
Smart Design & Engineering

Our Solution

Performance improvement



Devices Management



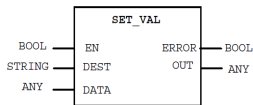
Technical highlights

- *Performance Improvement (Upload)*
- *Device Management : edit DIO numbers.*
- *Faster Installation (Libset)*
- *Flexible design*
 - *Init values on DFB*
 - *SET_VAL*
- *Migration from Quantum : SRAM on M580, LL984 display, AKF library*

install



Flexible design



Migration to M580



Control Expert V14.1 supports M580 CIP Safety



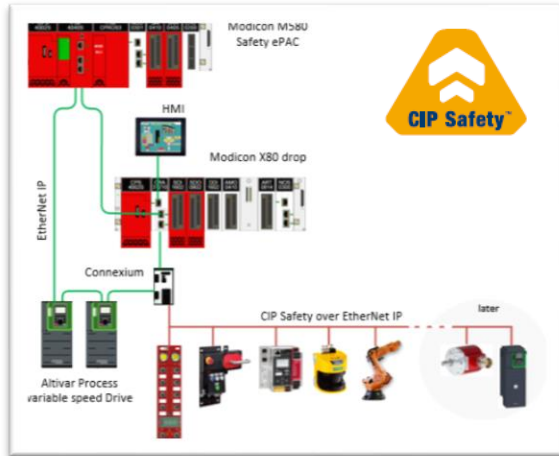
Customer Challenge

*Safety & Standard application in the same controller
Wide support of safety architecture,
CIP-Safety to connect to smart safety devices*

Our Value Proposition

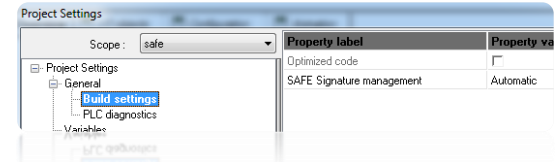
*Leverage engineering skills and
programming habits with a unique
software platform for M580 process and
safety*

Our Solution



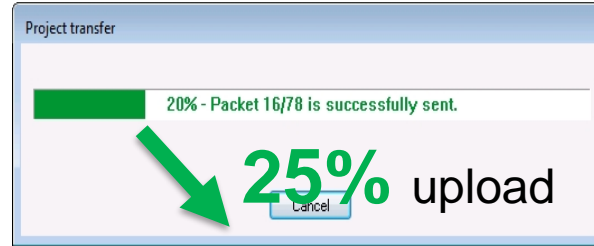
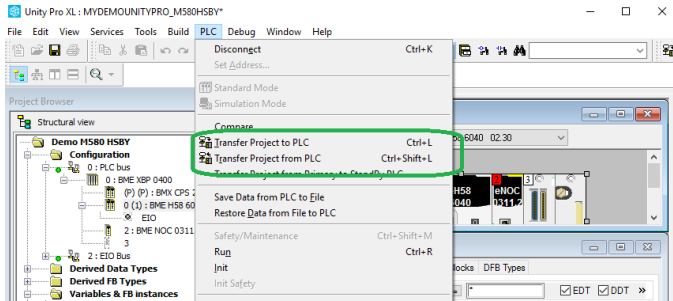
Technical highlights

- Control Expert V14.1 supports M580 **CIP Safety** : Safe communications with connected products through Ethernet
- SAFE Signature** : to know if “safety code” evolved or not



Go faster...from engineering to maintenance

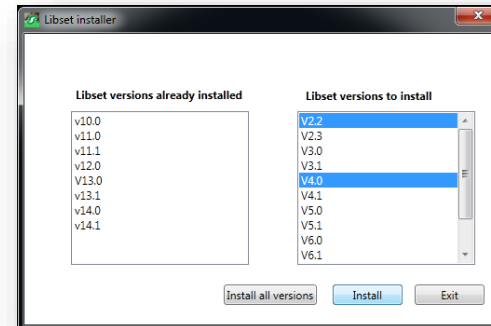
Go faster to Upload from Controller



Nota : Tests done on a set of representatives projects, versus Unity Pro V11

Simplified installation

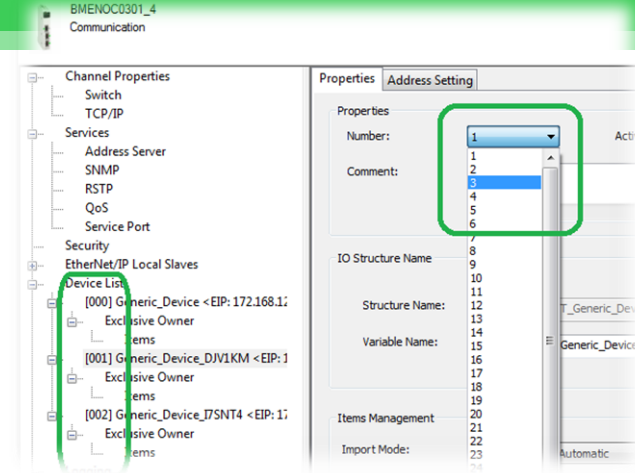
Libset versions < V10 are no more installed by default,
and can be installed when needed with **new Libset
Installer interface**



Devices management is made easier

Remove and add DIO device without impact on status

After addition or update a device, the **Device Number** can be selected among valid range, thus allowing easy update.



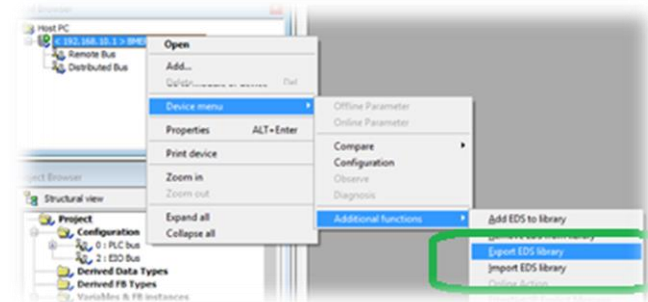
Manage PRM Profibus Devices from GSD with the Project

Enhanced default DTM naming rules (based on Product Name and Revision)

import/export GSD DTM Library between Control Expert Projects

Requires Control Expert V14.1 and PRM Gateway DTM: V1.3.2.0 minimum

https://www.se.com/fr/fr/download/document/PRM-Gateway-DTM_V1_3_2_0/



Migration to M580: keep some Quantum values and habits

SRAM is available on all M580 CPUs

Allowing mapping of new DDDT to original SRAM addresses (e.g.: to keep a legacy SCADA system...) and use of SRAM Viewer

And M580 **SRAM limits** are extended, for easy migration of large Quantum projects

0.0: BME P58 6040
CPU 580-6 ETH remote and distributed IO

Operating mode
Run/Stop
Run/Stop by input only
Memory protect
Automatic start in Run
Initialize 3MW on cold start
Cold Start Only

Quantum Remote drops
Support Quantum Remote drops (State ram size limited)

Size of global address fields
State RAM
3M: 30,000 3MW: 30,000
3I: 30,000 3IW: 30,000
3S: 128 3SW: 644 3KW: 32,760

Viewer
Maximum values

Configuration Online Modification
Online modification in RUN or STOP

State Ram Viewer

```
MyST-[MAST]  
%I0 := (*EBOOL+) WRITE_INPUT_EBOOL (PLC0_d0_r0_s2_DAI0805.DIS_CH_IN[0].VALUE);  
%I1 := (*EBOOL+) WRITE_INPUT_EBOOL (PLC0_d0_r0_s2_DAI0805.DIS_CH_IN[1].VALUE);  
%I2 := (*EBOOL+) WRITE_INPUT_EBOOL (PLC0_d0_r0_s2_DAI0805.DIS_CH_IN[2].VALUE);  
%I3 := (*EBOOL+) WRITE_INPUT_EBOOL (PLC0_d0_r0_s2_DAI0805.DIS_CH_IN[3].VALUE);  
%I4 := (*EBOOL+) WRITE_INPUT_EBOOL (PLC0_d0_r0_s2_DAI0805.DIS_CH_IN[4].VALUE);  
%I5 := (*EBOOL+) WRITE_INPUT_EBOOL (PLC0_d0_r0_s2_DAI0805.DIS_CH_IN[5].VALUE);
```

LL984 display is enhanced to display 16 bits data in 32 bits format

Modification Force

Name	Value	Type	Comment
%MW1	82000	INT to REAL	
%MW2	32000	INT to REAL	

Display Format
Decimal F3
Hexadecimal Ctrl+F3
Binary Shift+F3
ASCII Alt+F3

Initialize Search Ctrl+U
32-bit Integer

Modification Force

Name	Value	Type	Comment
%MW1	1.067439E+037	Floating Point	
%MW2	<n/a>	<n/a>	

AKF library supported on M580

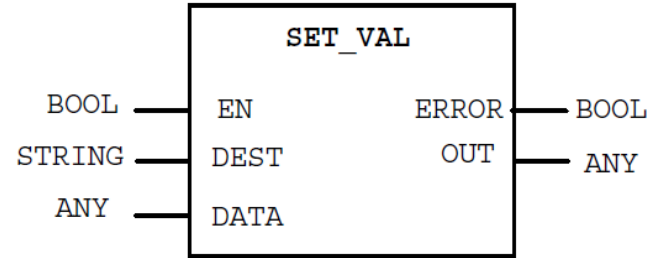
Variable types | EFB Types

Name	Type	Comment
AKF_1A	eFB	Switch of delay
AKF_1E	eFB	Switch-on delay
AKF_CT1	eFB	Pulse
AKF_TIS	eFB	Storing switch on delay
AKF_TV	eFB	Extended pulse
AKF_ZR	eFB	Decremental counter
AKF_ZV	eFB	Incremental counter
AKF_ZVR	eFB	Incremental/decreection counter

Flexibility in design

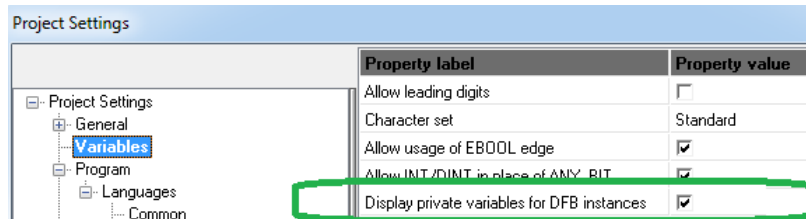
New SET_VAL function block

Set dynamically the value of any variable within the program



Init values on private DFB variables

Init values can now be set on private variables of DFB instances and types.



Misc. improvements

Save Data **from M340 and Premium** and restore **to M580**

Support x80 range

- Support new OPC UA **BMENUA0100** module
- RTU x80 IEC60870/DNP3 module **BMENOR0200** (*)
- Support new version of firmware for X80 ERT Time Stamping Module – Time synchronized from CPU (in catalog : **BMXERT1604.2**)

Predictive Power Supply Maintenance library (**PWS_DIAG, PWS_CMD**) is now integrated in Control Expert library , with updated documentation.

(*) will require additional Hot Fix

Companion Tools

Unity Loader V14 SP1 is available Q4 2019

Unity DIF V14 is available Q4 2019

- compatibility with **Control Expert V14.0 and 14.1** projects
- comparison of projects with **Program Units**
- improved **pdf report**

Life Is On

Schneider
Electric