What's New in Logix – **T013**

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Commercial Engineer

Agenda

- Controllers
- Inputs and Outputs (I/O)
- Motion Control
- Software

Integrated Architecture

A HIGH PERFORMANCE ARCHITECTURE

Smart. 

Automation system with

Productive. 

Simple integrated development resulting in improved

Secure. 

Integrated Architecture® Portfolio

Design Software

Studio 5000® | Connected Components Workbench™ Software | Arena®

Distributed Control System

PlantPAx®

Visualization & Information Software

FactoryTalk® | ThinManager®

Programmable Automation Controllers

CompactLogix™ | ControlLogix® | GuardLogix® | Armor™ GuardLogix®

Industrial Network Infrastructure & Media

Stratix®

Operator Interfaces & Industrial Computers

PanelView™ | MobileView™

Smart Sensing Devices

RightSight™ | VisiSight™ | RFID | Pressure

Input / Output Devices

Compact I/O™ | Compact 5000™ I/O | FLEX 5000™ I/O
FLEX™ I/O | POINT I/O™ | ArmorBlock® | ArmorPOINT®

Motor Control Devices

PowerFlex®
IntelliCENTER®

Motion Control

Kinetix® | iTRAK® | MagneMotion®

Rockwell Automation

CONTROLLERS

Micro800® Controllers, CompactLogix™ Controllers and ControlLogix® Controllers

Controller Portfolio

Micro Control Platform

Micro800® Controller

- Low acquisition cost
- Easy connectivity
- Simple programming tools
- Ideal for standalone machines

Standard Machines

CompactLogix™ Controller

Complex Machines & Process

ControlLogix® Controller

- Multiple control disciplines
- Flexible and scalable
- Real-time information enabled
- Standard, unmodified Ethernet
- One common integrated design environment
- Local and distributed I/O options

Process Safety

AADvance® /Trusted®

- Scalable redundancy for fault tolerance
- Provides safety and availability requirements
- Distributed processing power

Micro870® Controller

Connected Components Workbench™ Software
Version 11 required

New

Increased memory and I/O capacity

- 2x the program and data memory capacity of Micro850® controller
- Up to 20K steps | Up to 8 expansion I/O | Up to 304 local I/O
- Catalog 2085-EP24VDC expansion power supply for additional I/O modules
- Catalog 2085-MEMBAK-RTC2 for larger memory capacity backup

Communications

- Ethernet, Serial and USB ports
- Native EtherNet/IP | Modbus-TCP/IP | Modbus RTU | ASCII | CIP Serial
- Open socket programming

Plug-in modules for customization and flexibility

Motion Capabilities

- 100 kHz High Speed Counter | 100 kHz Pulse Train Output | PLCopen Motion instructions

Standalone applications requiring up to 304 I/O and 20,000 step program size

- Multi-track intermittent VFFS machines; large curing machine; gas cabinet in semiconductor; pipe heating systems; mono-layer blown film extrusion; large heat exchange systems; large welding machine and more.

CompactLogix™ Controllers

CompactLogix™ 5370 Controller

- Controller Memory extended to 5 Mb to support large applications
- Integrated Motion on EtherNet/IP™ up to 16 axes
- Linear and Device Level Ring network topologies for up to **80** nodes
- Integrated safety up to SIL 3, PLe Cat. 4 versions
- On-Machine™ version

CompactLogix™ 5380 Controller

- Integrated Motion on EtherNet/IP up to 32 axes
- Two Ethernet ports for dual IP or support for linear and Device Level Ring topologies for up to **180** nodes
- Enables high-speed I/O, motion control.
- Scalable Integrated safety up to SIL 3, Ple, Cat. 4 versions. SIL 3 available from Mid 2019.
- Enhanced security features

New

CompactLogix™ 5480 Controller

- Enables high-speed I/O, and Integrated Motion on EtherNet/IP up to 150 axes
- Includes three-GbE Ethernet/IP ports supporting both linear or Device Level Ring topologies up to 250 nodes
- Provides a Logix based real-time controller that runs in parallel to an instance of Windows 10 IoT Enterprise
- Enhanced security features

Multiple disciplines

Flexible and scalable

One common design environment

Rockwell Automation

ControlLogix® Controllers

ControlLogix® 5570 Controller

- Integrated Motion on EtherNet/IP™ up to 100 axes
- Integrated safety up to SIL 3, PLe CAT 4 versions
- On-Machine versions
- Conformal coat and extreme environment versions
- Redundancy releases now for every major release

ControlLogix® 5580 Controller

- Integrated Motion on EtherNet/IP™ up to 256 axes
- 1 gigabit (Gb) embedded Ethernet port enables high-speed I/O and motion control for up to 300 nodes
- Conformal coat versions
- Removal insertion under power
- Enhanced security features
- IEC 62443-2 Certified – Available March 2019

Multiple disciplines

Flexible and scalable

One common design environment

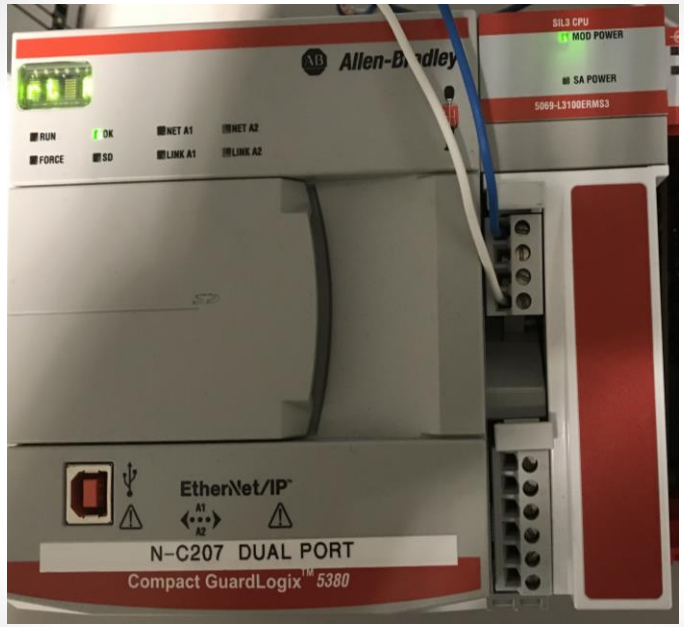
Rockwell Automation

SAFETY CONTROL

Compact GuardLogix® and ControlLogix® Safety I/O

Compact GuardLogix® 5380 | SIL 3

Phasing in from Mid 2019



New

High-performance CPU

- Optimized for faster safety reaction time

Scalable Safety Level

- SIL CL3, Up to PLe

Dual 1-Gb Embedded EtherNet/IP Ports

- Configurable Dual IP or DLR
- Integrated Safety on EtherNet/IP

Compact 5000™ Local Safety I/O - Increased Scalability

- 5069-L306ERMS3: 600 KB Std / 300 KB Sfy; 2 axes; 16 nodes
- 5069-L310ERMS3: 1 MB Std / 0.5 MB Sfy; 4 axes; 24 nodes
- 5069-L320ERMS3: 2 MB Std / 1 MB Sfy; 8 axes; 40 nodes
- 5069-L330ERMS3: 3 MB Std / 1.5 MB Sfy; 16 axes; 60 nodes
- 5069-L340ERMS3: 4 MB Std / 2 MB Sfy; 20 axes; 90 nodes
- 5069-L350ERMS3: 5 MB Std / 2.5 MB Sfy; 24 axes; 120 nodes
- 5069-L380ERMS3: 8 MB Std / 4 MB Sfy; 28 axes; 150 nodes
- 5069-L3100ERMS3: 10 MB Std / 5 MB Sfy; 32 axes; 180 nodes

ControlLogix® Safety I/O

Connects to Compact GuardLogix® 5380
or GuardLogix® 5580 Controllers

New

ControlLogix® I/O

- Chassis-based, local I/O
- Can be used as distributed I/O via communication networks

Safety rated

- Analog & Digital, Input and Output Modules
- Both Isolated & Non-Isolated Modules
- SIL 2, PLd Certified Modules
- SIL 3, PLe Certified Modules
- Input Modules: **IB16S, IB8IS, IA8IS, IF8IHS**
- Output Modules: **OBV8S, OB8IS, OW8IS, OF8IHS**

Flexible

- Any ControlLogix® Safety I/O module can be used in combination with all other standard ControlLogix® I/O modules

Phased introduction, starting in 2019

FactoryTalk® Analytics™ LogixAI™

*Descriptive | Diagnostic | **Predictive** | Prescriptive*

Configure
- Install module in ControlLogix chassis

Identify Data
- What to predict
- Related inputs

Model
- Automatically thin data
- Automatically build model

Monitor
- Use auto-quality
- Continue learning

Integrate your predictions!

No data scientist required

New

LogixAI
FactoryTalk® Analytics

CompactLogix™ 5480 Controller

New

Logix controller with Windows 10 IoT Enterprise in parallel

- Commercially available CPU for high performance
- Run Windows applications in parallel to Logix real time control
- Up to 20 MB Logix user memory, 150 axes on EtherNet/IP, 250 nodes

Enhanced Security

- Digitally signed and encrypted firmware
- License based source and execution protection

(3) Logix 1-Gb Embedded EtherNet/IP Ports

- 2 ports configurable Dual IP or DLR

Windows 10 IoT Enterprise

- (1) GbE port
- (2) USB 3.0 ports

Monitor Interface

- DisplayPort supports standard converters for HDMI, DVI, VGA displays

Compact 5000™ Local I/O

- Supports up to 31 local I/O modules

Feature	CompactLogix™ 5380	ControlLogix® 5580	Compact GuardLogix® 5380	GuardLogix® 5580	CompactLogix™ 5370	ControlLogix® 5570	Compact GuardLogix® 5370	GuardLogix® 5570
Instruction based alarms	✓	✓	✓	✓	✓	✓	✓	✓
Logix tag-based alarms	✓	✓	✓	✓				
License-based protection	✓	✓	✓ (standard task only)	✓ (standard task only)				
Analog Motion		✓		✓		✓		✓
SERCOS Motion		✓		✓		✓		✓
SIL2 PLd			✓	✓		Application SIL2		
SIL 3 PLe			Future	✓			✓	✓
Network STO			✓	✓			✓	✓
Safe Stop and Safe monitoring drive instructions			✓	✓				
5-axis Kinematics	✓	✓	✓	✓				
Secure communications	Future	✓ V32	Future	Future		Future w/ EN4T		Future w/ EN4T
PhaseManager™	✓ V32	✓ V32	✓ V32	✓ V32	✓	✓	✓	✓
SequenceManager™	Future	Future	Future	Future	✓	✓	✓	✓
Emulate	Future	Future	Future	Future	✓	✓		
Redundancy		Future				✓ 31.05		
Conformal Coat	Q4 CY2018 Limited Catalogs	✓	Q4 CY2018 Limited Catalogs	✓	✓ Limited Catalogs	✓	✓ Limited Catalogs	✓
XT/NSE	✓NSE	Future		Future		✓		✓

I/O

Compact 5000™ I/O, ArmorBlock® I/O, FLEX 5000™ I/O

I/O Portfolio

Chassis and Distributed I/O

ControlLogix®

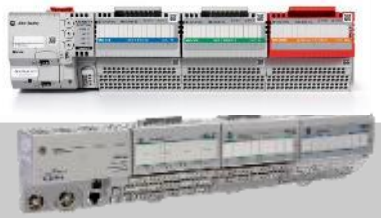
Chassis-based I/O

- I/O diagnostics for detection of both system and field-side failures
- Electronic keying to help prevent replacement errors
- Wide range of modules from high performance to process control

FLEX™, FLEX 5000™

Process Distributed I/O

- High-performance FLEX 5000™ I/O for CompactLogix™ 5380 and ControlLogix® 5580
- High-channel density on a distributed platform



1719 Ex, 1715 Redundant

Intrinsic Safety and High Availability I/O

- 1719 Ex I/O for hazardous area locations
- 1715 Redundant I/O provides high availability for ControlLogix® controllers

Dynamix™

Condition Monitoring

- Integrates machine protection with your standard control system
- Dual Ethernet ports supporting both Linear and Device Level Ring topologies

Compact I/O™, Compact 5000™

Discrete Machine I/O

- High-performance Compact 5000™ I/O for CompactLogix™ 5380 and ControlLogix® 5580
- High-density Compact I/O™ for CompactLogix™ 5370

POINT I/O™

Smart Machine Distributed I/O

- Low-cost platform with lower density inputs and outputs
- Compact design makes installation easier
- Machine safety, specialty and IO-Link options available

ArmorBlock®

On-Machine™ I/O

- IP67 rated modules
- Reduces wiring and panel space
- Quick connect for daisy chaining modules
- Analog, Digital, specialty, machine safety and IO-Link options available

Compact 5000™ I/O Discrete Safety Input

5069-IB8S

- Safety digital input module
- Single Channel: PLd
  - Single Channel allows use of the module for up to Safety Category 3, in applications rated up to and including Performance Level d/SIL 3 with safety pulse test enabled
- Dual Channel: PLe
  - Dual Channel allows use of the module for up to Safety Category 4, in application rated up to and including Performance Level e/SIL 3 with safety pulse test enabled
- Diagnostic capability:
  - Short circuit, Muting Lamp Error, Over & Critical Temperature, Field Power OFF, internal fault, Overload detection with Test Output.

Local and distributed I/O for Compact GuardLogix® 5380 controller

Distributed I/O for GuardLogix® 5580 controller

Target – March 2019

Compact 5000™ I/O Discrete Safety Output

5069-OBV8S

- Configurable Safety Output module (Sourcing / Bipolar) Sourcing mode:
  - Single Channel: up to Cat 4, up to and including PLe with pulse test enabled, IEC 60947 for contactors/actuators
  - Dual Channel: up to Cat 4, up to and including PLe with wiring according to EN 13849 and safety pulse test enabled Fault of one channel does not shut down the whole module
- Bipolar mode: PLe
- Diagnostic capability:
  - Short circuit, No Load(Open Wire), Overload, Over & Critical Temperature, Field Power OFF, Dual Channel Fault(only sourcing mode)

Local and distributed I/O for Compact GuardLogix® 5380 controller

Distributed I/O for GuardLogix® 5580 controller

Target – March 2019

Compact 5000™ I/O SERIAL

New

- Supports multiple protocols
  - Generic ASCII and MODBUS RTU/ASCII (Now)
  - DF1 and DH-485 (Future)
  - Configurable in Studio 5000® (Version 31 onwards)
- Generic ASCII
  - Send and Receive Data in simplified way
  - Common user experience as 1769-ASCII module
- MODBUS RTU/ASCII
  - Up to 50 Modbus Master commands per port
  - Up to 30 entries of Modbus Slave data per port
  - Data mapped directly back to module tags
  - Minimize complex programming

Enables the high-performance Logix Controller (bulletin 5380) to communicate with legacy devices

Compact 5000™ I/O

- Compact 5000™ Serial I/O
  - Released since: May 2018
- Compact 5000™ Safety I/O
  - Target release: March 2019
- CompactLogix™ 5380 Controllers
  - Full connectivity to Compact 5000™ I/O both locally and remotely via adapter
- ControlLogix® 5580 Controllers
  - Full connectivity to Compact 5000™ I/O remotely via adapter

AENTR	AEN2TR	EtherNet/IP Adapter
IB6F-3W	IB16F	IB16	Input - 24 Vdc
OB16F	OB16	Output - 24 Vdc
IF8	IY4	Input – Analog/Temperature
OF8	OF4	Output – Analog
OX4I	OW4I	Output – Relay Isolated
	HSC2xOB4	High-Speed Counter
	FPD	Field Power Distribution
	ARM	Address Reserve
	IA16	Input – 120/240Vac
	OA16	Output – 120/240Vac
	OB8	Output - 24 Vdc
	OW16	Output – Relay
	SERIAL	Serial

Available in Q1 CY2019

IB8S	Digital Safety Input
OBV8S	Digital Safety Output

FLEX 5000™ I/O

Next Generation 5000 Series I/O Platform Technology

New

Rugged Design

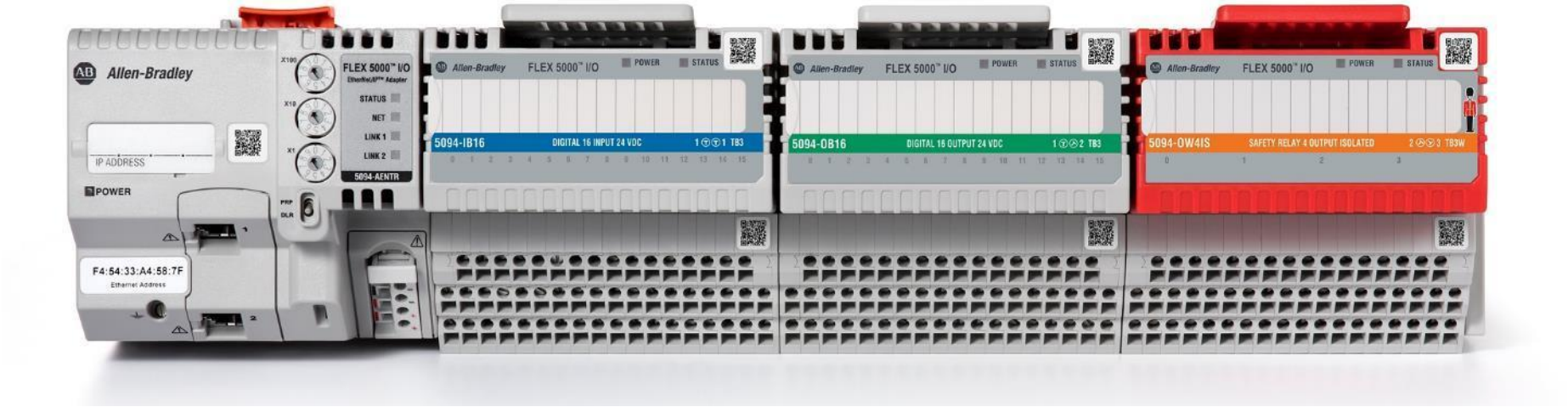
Operating Temperature:
-40 °C…+70 °C
(-40 °F...+158 °F)

Hazardous Environments:
Class I, Div. 2
Zone 2 Groups
A, B, C, D

Performance
1 Gigabit (Gb) EtherNet/IP
1 Gigabit (Gb) Backplane Speed

Standard I/O
16 Channel Digital In/Out
8 Channel Analog In/Out

Safety I/O (SIL 3, PLe, Cat. 4)
16 Channel Digital In/Out
4 Channel Analog In/Out



Network Media and Topologies
2 Copper/2 Fiber Ports
Supports Device Level Ring (DLR), Star, Linear, Parallel Redundancy Protocol (PRP)

Easy Snap-on Installation
Removal and Insertion Under Power (RIUP)

Consistent I/O Wiring
Direct Termination of 2, 3 & 4 wire devices

Distributed I/O for ControlLogix® 5580 controller, GuardLogix® 5580 controller
Distributed I/O for CompactLogix™ 5380 controller, Compact GuardLogix® 5380 controller

FLEX 5000™ I/O

Flexible Network Media and Topologies

- 1-Gb embedded switch technology for Device Level Ring, Linear, Star, and Parallel Redundant Protocol (PRP) topologies
- Dual Ethernet ports available as 2 Copper or 2 Fiber SFP ports, compatible with any Stratix® SFP transceiver

Flexible Design and Maintenance

- On-line addition of modules and racks
- Modular design supports Removal and Insertion Under Power (RIUP)
- Consistent I/O wiring allows direct termination of 2-, 3-, and 4-wire devices in addition to consistent power wiring across terminal bases with jumpers
- Mount up to 16 I/O modules in either a horizontal or vertical mounting without de-rating, interconnect cable available for bank expansion
- Standard operating temperatures from -40…+70 °C, XT variant available for all catalogs for conformal coating and G3 compliance

Integrated Control and Safety

- Channel-level control and configuration with enhanced diagnostics.
- Ability to Mix Safety and Standard I/O for simplified safety implementation.
- Safety Integrity Level SIL 3, PLe, Cat. 4 Single Channel
- Supports High, Low & Continuous Demand in fail-safe applications.
- Faster Safety Reaction Time

FLEX 5000™ I/O

EtherNet/IP Adapter Highlights

RJ45 Adapter

SFP Adapter

Stratix® SFP transceiver

Functionality & Performance

- 1-Gbps, DLR, Linear & PRP
- Secured embedded web server
- Implicit & explicit protection

Flexible Installation

- RJ45 & SFP versions
- 8 or 16 I/O module support
- Intermix copper and fiber SFP

Ease of Maintenance

- Easy access ports
- Input power & temperature diagnostics
- RTB for power terminals

FLEX 5000™ I/O

Release Schedule

Distributed I/O for

- ControlLogix® 5580 Controller
- CompactLogix™ 5380 Controller
- CompactLogix™ 5480 Controller
- GuardLogix® 5580 Controller
- Compact GuardLogix® 5380 Controller

June 2018

Standard

Catalog	Description
5094-AENTR	EtherNet/IP Adapter RJ45 8 I/O
5094-AEN2TR	EtherNet/IP Adapter RJ45 16 I/O
5094-IB16	16 Point Digital Input
5094-OB16	16 Point Digital Output
5094-OW8I	8 Channel Relay Output Isolated
5094-IY8	8 Channel Universal Analog Input
5094-OF8	8 Channel Analog Output
5094-HSC	2 Channel High-Speed Counter
5094-IF8	8 Channel Analog Input *(15 Aug 2018)*

Available for Sale

September 2018

Network Support

Catalog	Description
5094-AENSFPR	EtherNet/IP Adapter SFP
5094-AEN2SFPR	EtherNet/IP Adapter SFP

Available for Sale

December 2018

Accessories

Catalog	Description
5094-CE05	0.5 Meter Bank Extender Cable
5094-CE10	1 Meter Bank Extender Cable
5094-CE30	3 Meter Bank Extender Cable

March 2019

SIL 3 Safety – Digital, Network Support

Catalog	Description
5094-IB16S	16 Point Digital Input Safety
5094-OB16S	16 Point Digital Output Safety
5094-OW4IS	4 Point Relay Output Isolated Safety
PRP Firmware	PRP Adapter Support

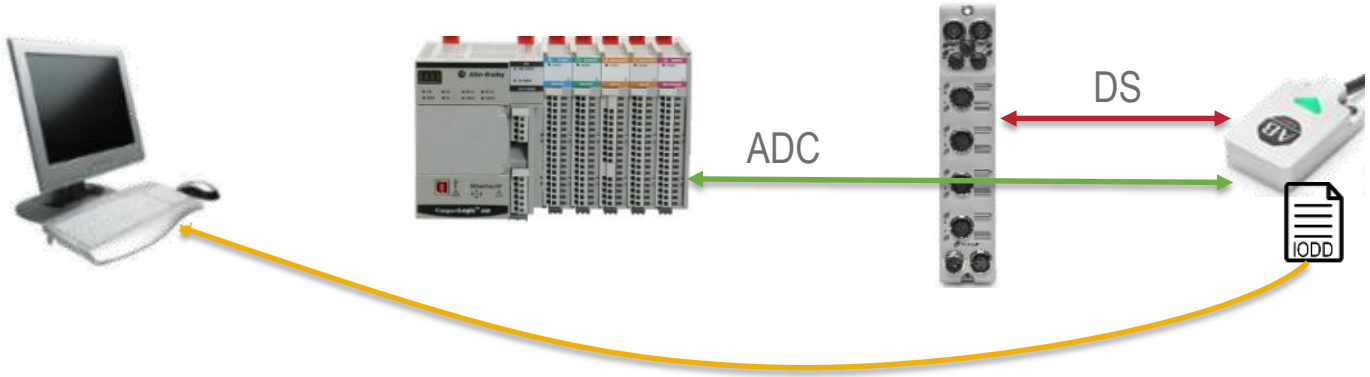
***Catalogs Available in 2 Variants* (except cables)**

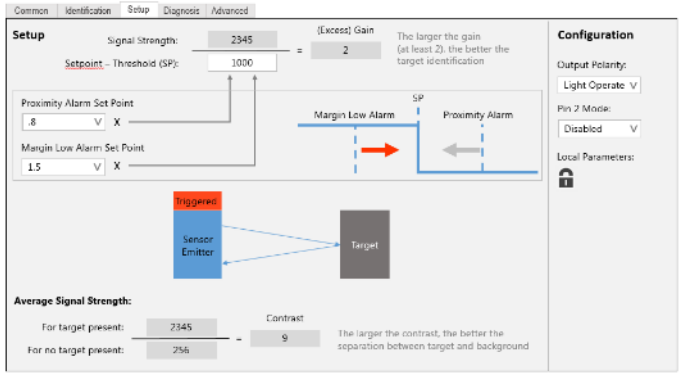
- *Standard version with operating temperature at* -40 °C…+70 °C (-40 °F...+158 °F)
- *Extreme Environment (XT) variant with operating temperature at* -40 °C…+70 °C (-40 °F...+158 °F) *and conformal coating for G3 compliance*

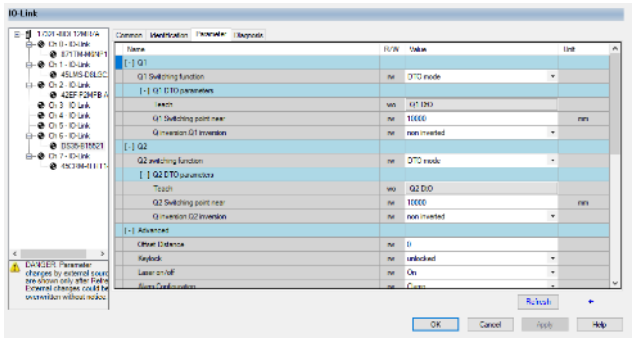
Enhancements to IO-Link Masters

Bulletin 1734 and 1732E

- AOP and Firmware Update to IO-Link Masters
  - Device discovery
  - Embedded IODD support
  - Device-specific screens
  - Data storage
  - Fallback
  - Configuration tabs for third-party sensors







ArmorBlock® I/O

IO-Link Hub Overview

New

Standard I/O in 3 Options
16 digital input (16DI),
10 digital input 6 digital output (10DI6DO)*
16 digital input and output (16DIO)*

Rugged Design
Nickel plated zinc-die cast

Reduced Wiring
Up to 16 A
with M12 L-coded
Auxilliary power connector
(16DIO)

Easy Troubleshooting
Auxiliary power diagnostic LED

Quick and Simple Installation
Standard M12 I/O connector

Easy Identification
2 different I/O color light-emitting diodes (LEDs)

Quick Identification
QR code with product information

Simplified Design
IO-Link connector

Preliminary specifications subject to change.

* Q1/Q2 2019 Release

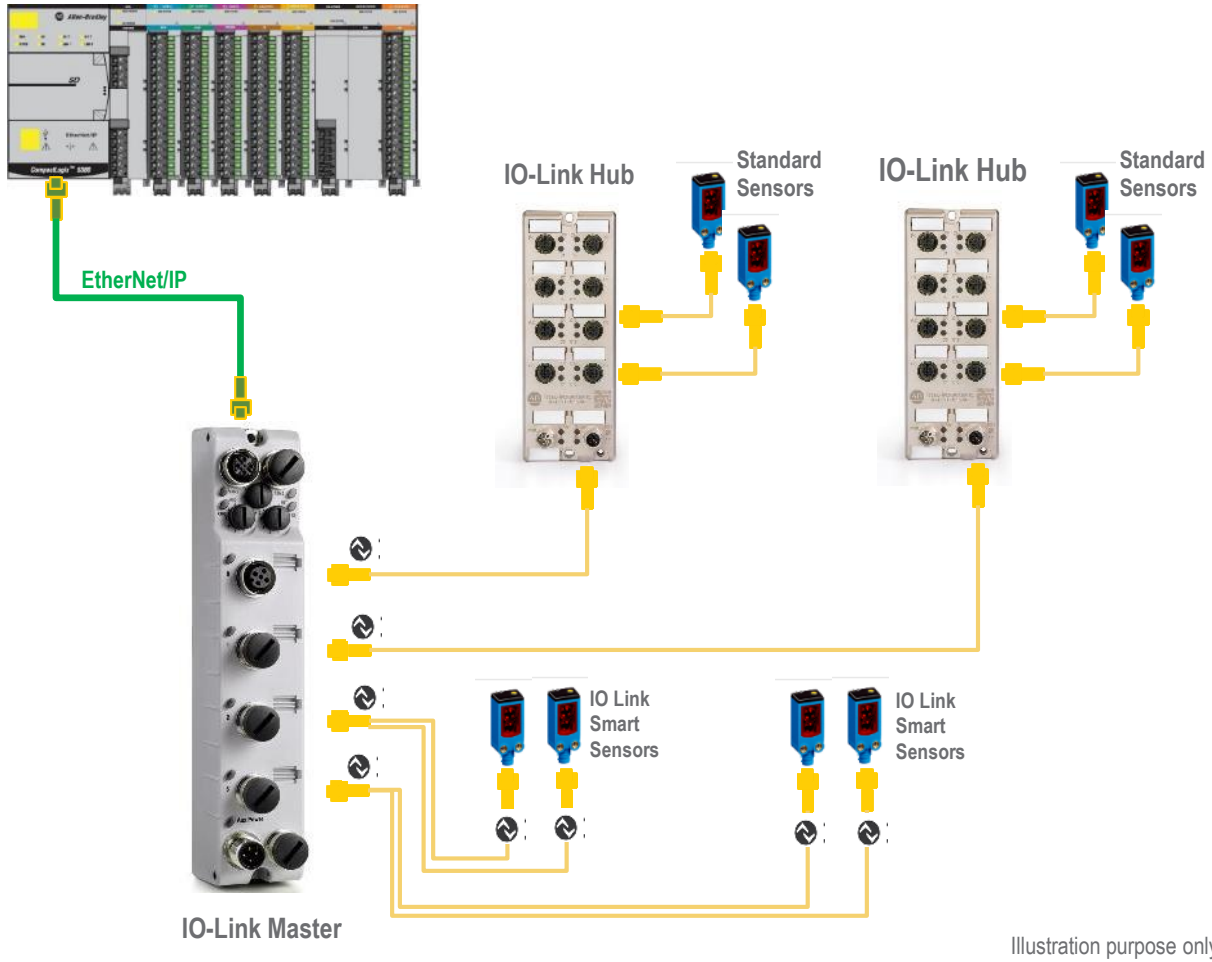


Illustration purpose only

1719 Ex I/O

1719 Ex I/O Modules

- Intrinsic safety field connections
- Zone 2 or Class I, Division 2 applications
- Removal and Insertion Under Power (RIUP)
- Modularity for scalability

Certifications

New

- RCM (Australia)
- INMETRO (Brazil)
- NEPSI (China)

1719-IBN8

New

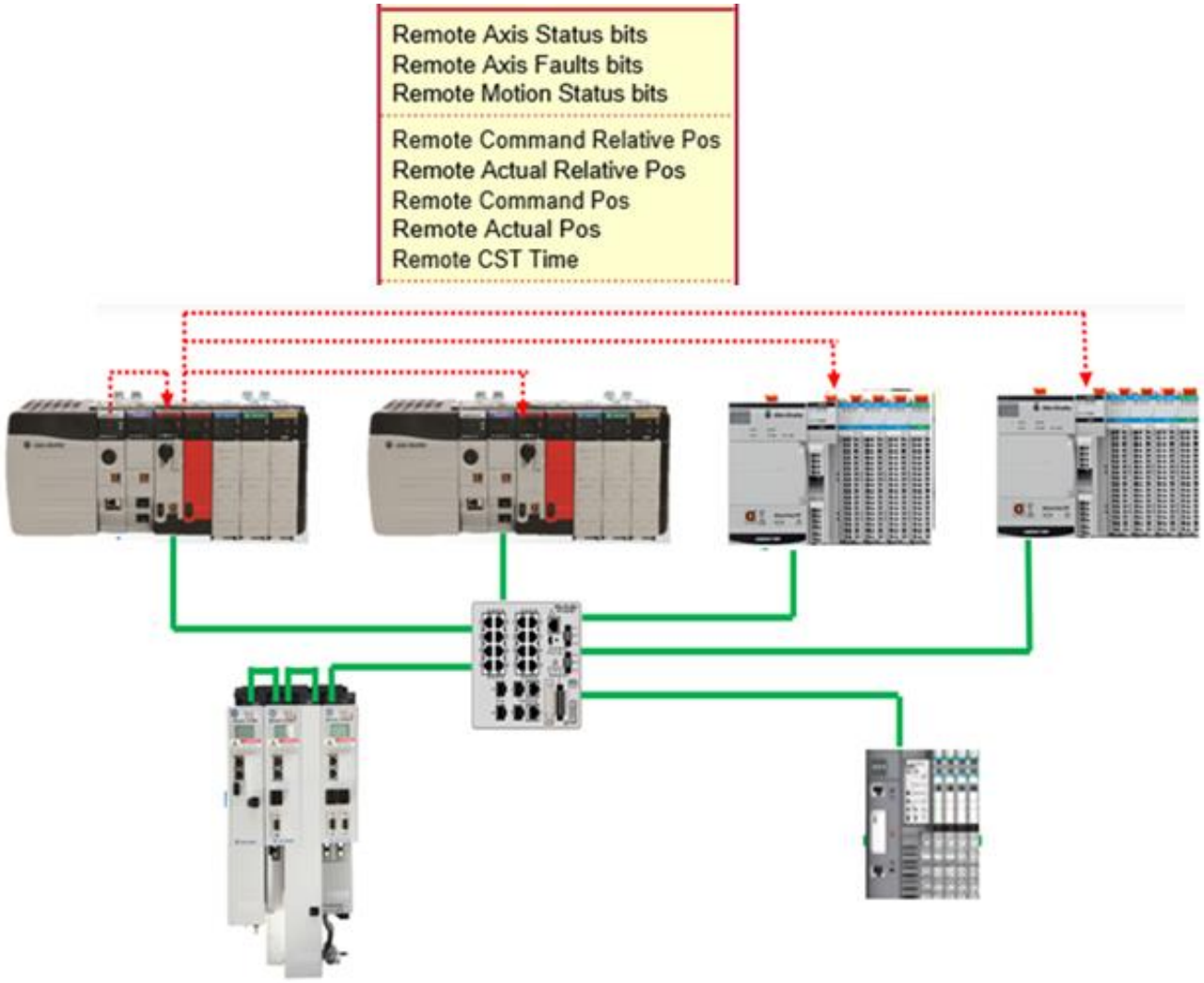
- Slim 8 Channel input module with Namur Specification – Spring terminal

MOTION CONTROL

EtherNet/IP Produced/Consumed Axis feature

EtherNet/IP Produced/Consumed Axis

- Support for produced-consumed axes between Logix controllers via EtherNet/IP
- ControlLogix® and GuardLogix® 5580, CompactLogix™ and Compact GuardLogix® 5380, CompactLogix™ 5480 controllers
- Coordinate motion across multiple Logix controllers
  - Moves - Gear, PCAM, MDSC mode
  - Events - registration, handshaking
- Implemented as an extension to the 1756 in-chassis produced-consumed axis feature
  - Familiar 1756 chassis P/C axis configuration extended to include controllers via EtherNet/IP
- Virtual, CIP Motion, Analog, and SERCOS axes
- Use with any Ethernet topology
  - Support for Uni-cast and Multi-cast configurations
- Functional alternative to SynchLink™
  - Helps reduce proprietary, dedicated fiber-optic link
  - Use existing EtherNet/IP infrastructure



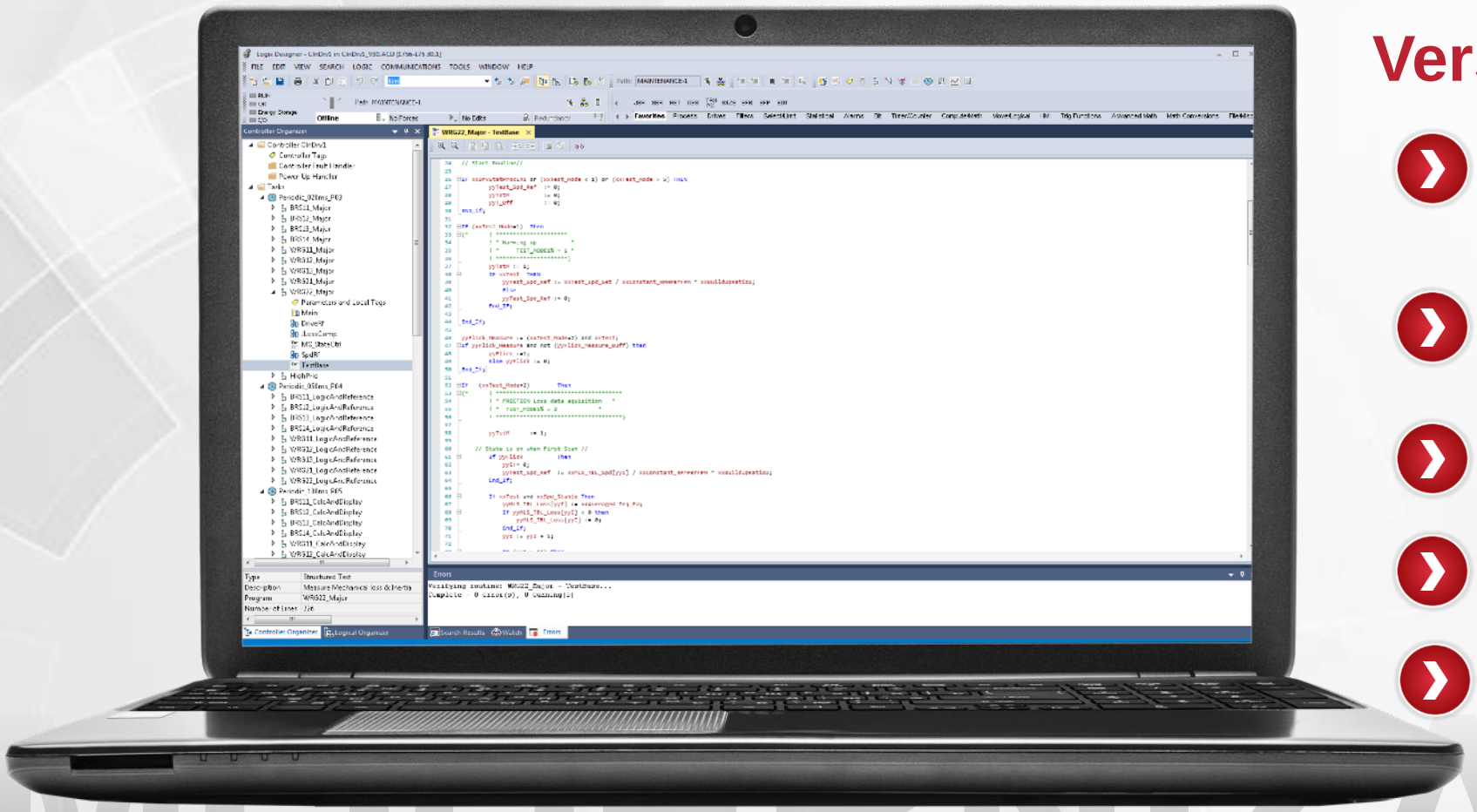
SOFTWARE

Studio 5000® Design Environment

Architect		Enables Simplified System Design and Data Exchange
Logix Designer		Collaborative System Programing and Configuration
View Designer		Highly Integrated HMI with Logix
Application Code Manager		System Reuse and Quickly Build Projects
Logix Emulate		Virtual Design and Operator Training Systems
Simulation Interface		Connect Logic to Simulation Models

Studio 5000 Logix Designer® Application

What's New?



Version 32 Summary

- Extended Data Types (64-Bit Math)
- Tag-based Alarm Enhancements
- New FBD Functions
- Productivity Enhancements
- Phase Manager Support

MODERNIZATION

Extended Data Types: 64-Bit Math

64-Bit Math

Boolean	**BOOL**
Short Integer	**SINT**
Integer	**INT**
Double Integer	**DINT**
Real Number	**REAL**
Unsigned Short Integer	**USINT**
Unsigned Double Integer	**UDINT**
Unsigned Integer	**UINT**
Unsigned Long Integer	**ULINT**
Long Real Number	**LREAL**
Long Integer	**LINT**

Overview

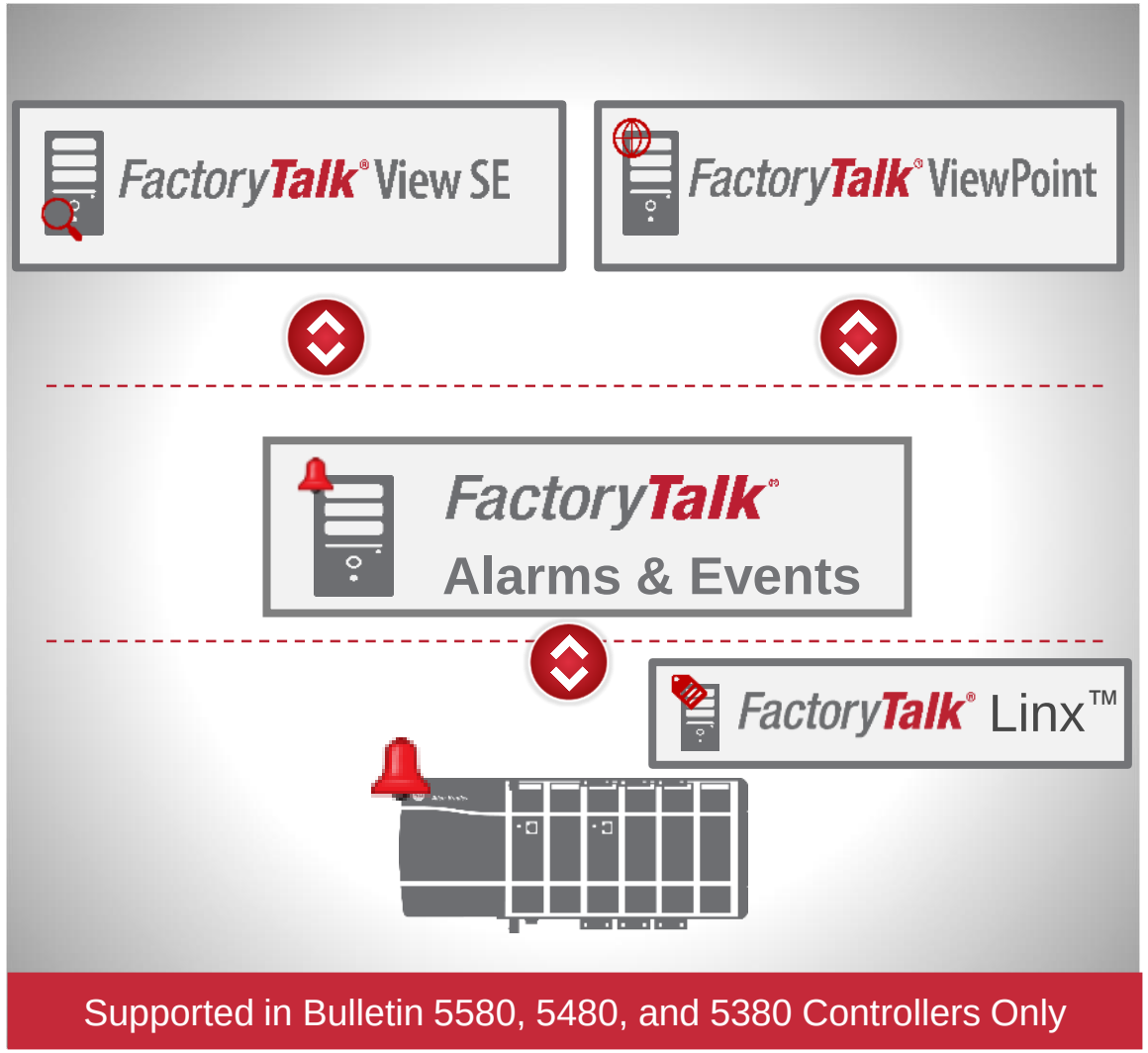
Now use new extended data types in 5380/5580 controllers to calculate more precise or larger values for use in your calculations.

Benefits

- Calculate more precise values in your calculations with higher resolution.
- More flexibility to comply with open/third-party communications standards. For example, HART

Logix Tag-Based Alarms

Recap from Version 31: Alarming Capabilities for Streamlined Workflows



Supported in Bulletin 5580, 5480, and 5380 Controllers Only

Overview

Logix Designer application Version 31 added new alarming functionality in the controller. With the new Logix Tag-Based Alarming, alarms can now be defined on “tags” or “structures” in the controller with periodic evaluation.

Benefits

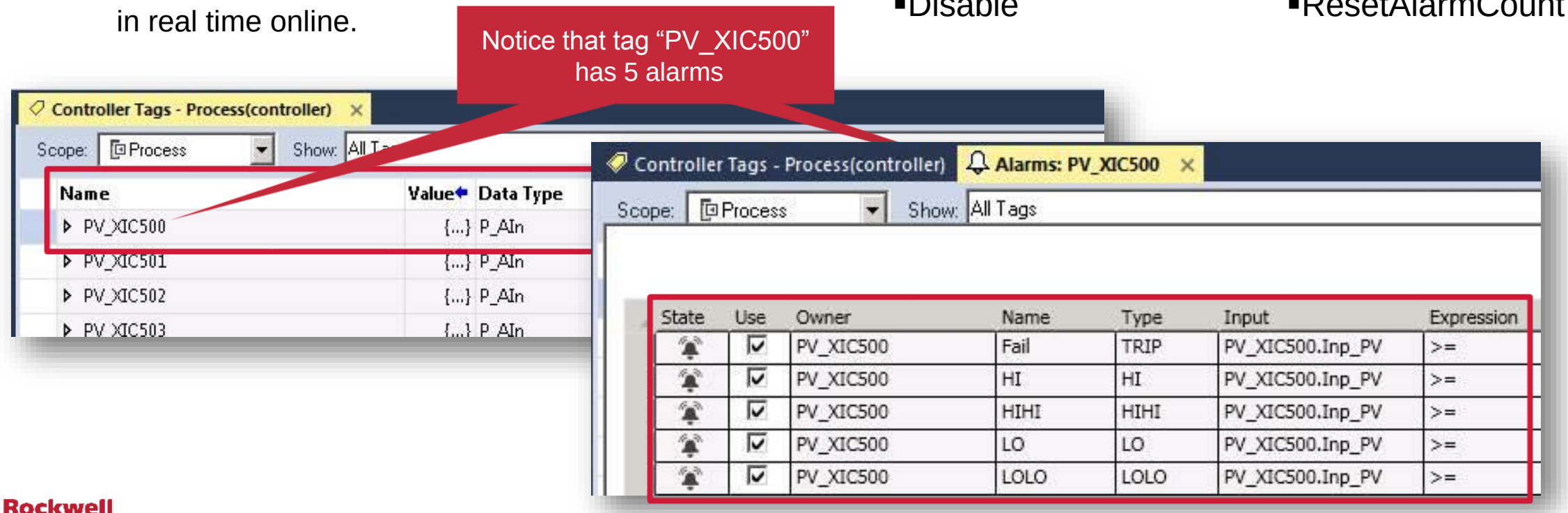
- No need to add an instruction; simplified design workflows inside Studio 5000 Logix Designer® application
- No addition programming required – alarms automatically sent to FactoryTalk® Alarms and Events
- New alarm manager provides one place to configure
- Small memory footprint – great for applications that have high alarm counts
- Alarm definitions allow for increased modularity
- Supports bulk generation of alarms via XML import/export

Alarm Library Management

Troubleshooting and Diagnostic Enhancements

- **Tag Browser**
  - View Alarm Count On Per-Tag Basis
- **Alarm Manager**
  - View Status of each alarm in real time online.
- **Alarm Set Operation– (ASO)**

  Issues a specific operation to all alarm conditions in a set.
  - Acknowledge
  - Reset
  - Enable
  - Disable
  - Unshelve
  - Suppress
  - Unsuppress
  - ResetAlarmCount

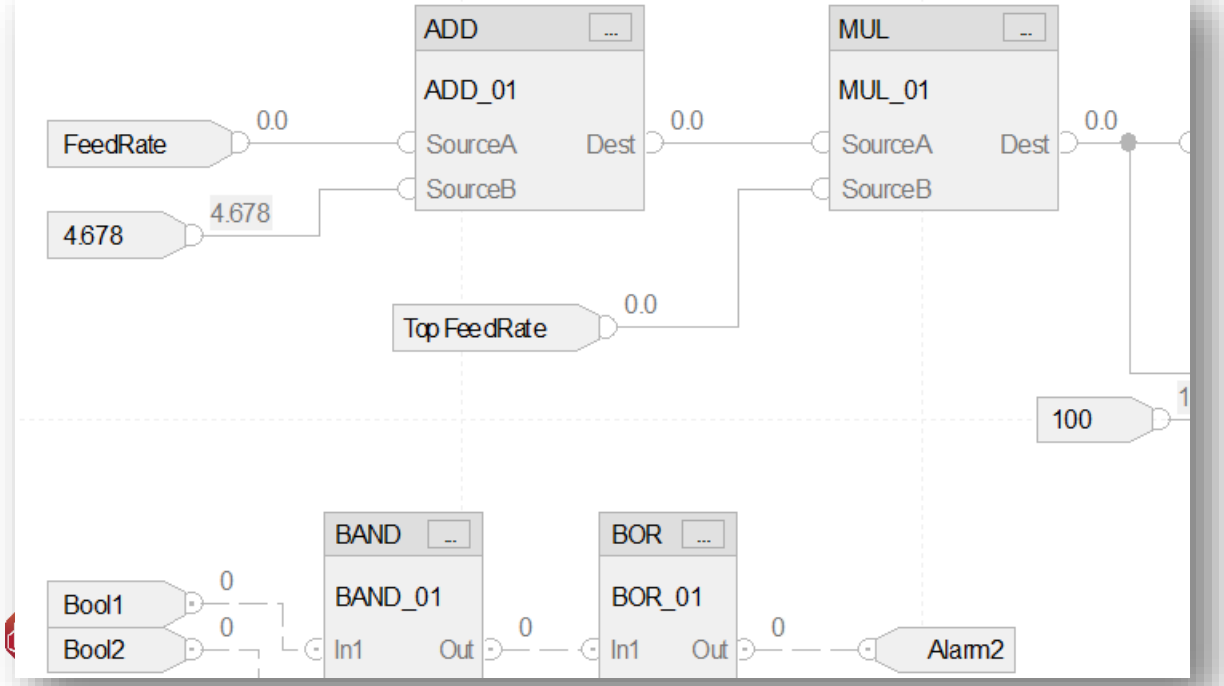


FBD Functions

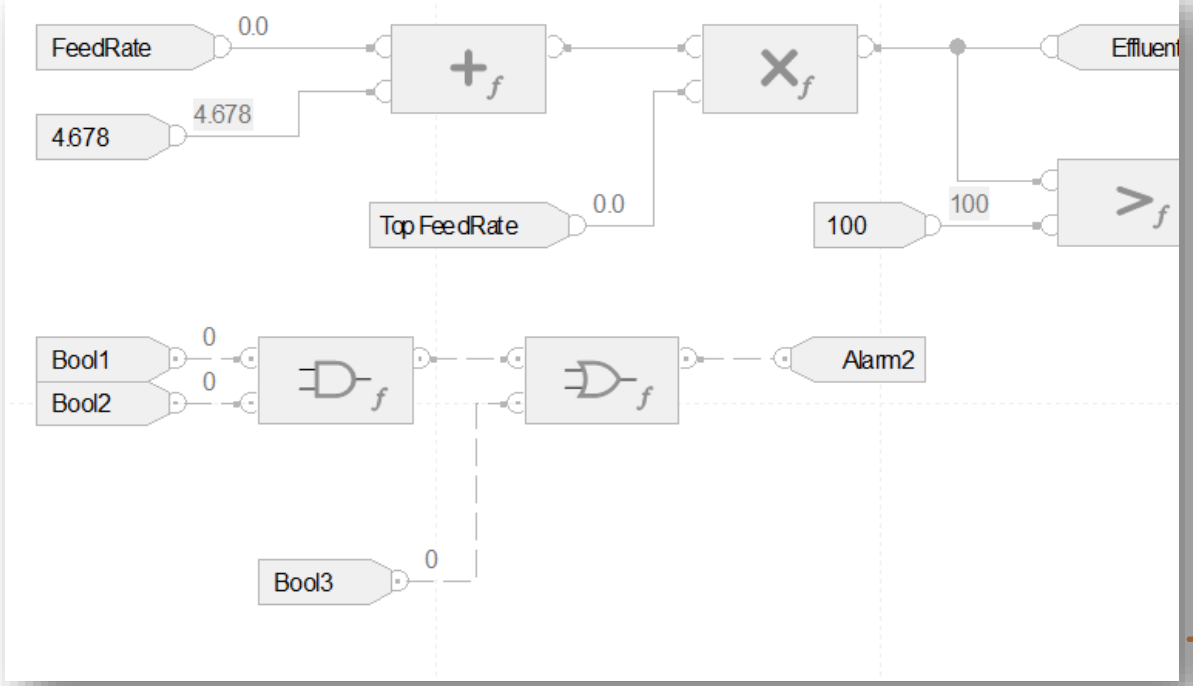
Optimized Instructions to replace existing instructions. Bulletin 5580/5380/5480 Controllers Only

- Smaller visual footprint
- No backing tag
- More intuitive symbol-based functions
- Compare/Compute/Boolean Logic Instructions

Before



After

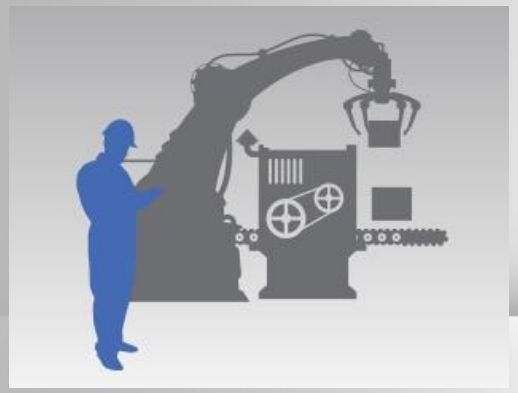


SOFTWARE

Digital Engineering

Digital Design Overview

Increases design productivity and reduce risk with virtual design

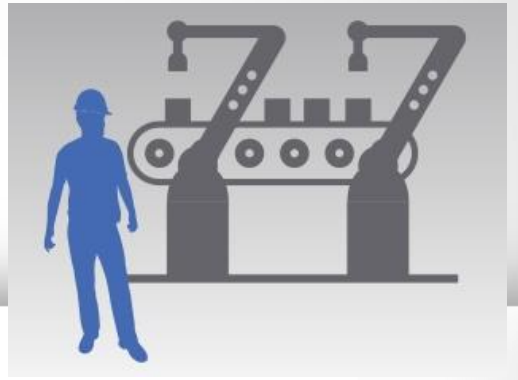


Machine Prototyping

Easily design and build next generation machines with confidence

Throughput Analysis

Optimize throughput with simple, real-time 3D simulation of complex dynamic processes



Virtual Commissioning

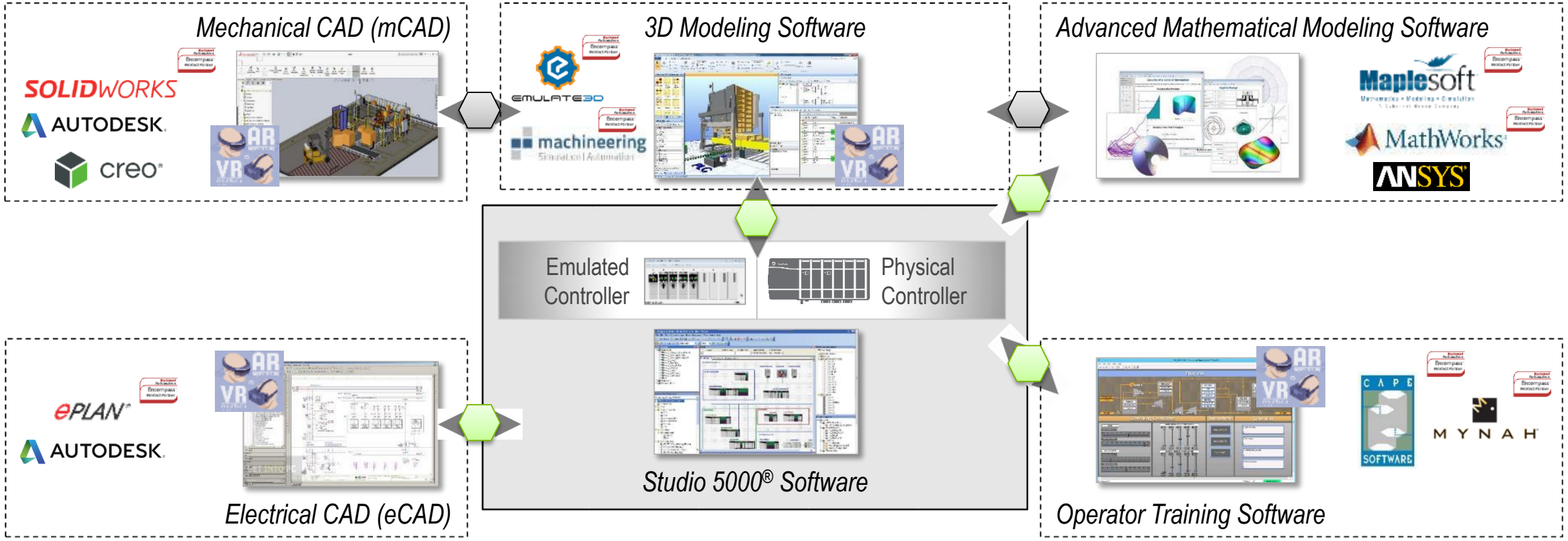
Design, test, validate, and commission machines or SKUs before they are put into service

Operator Training Systems

Reduce risk and improve operations by training workforce in a safe, virtual environment

Digital Engineering

Ecosystem

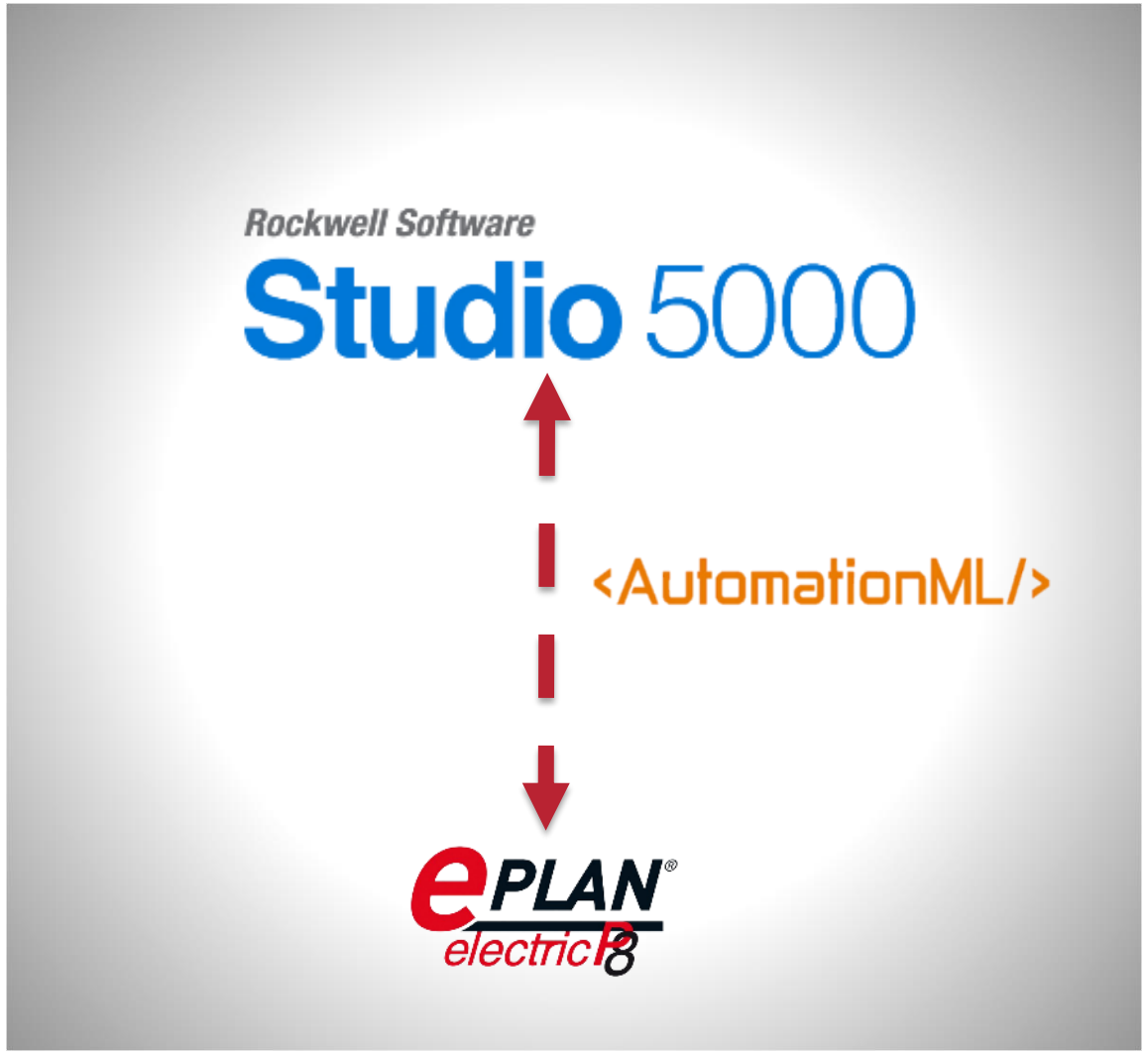


Interface supplied by third-party software company

Interface supplied by Rockwell Automation

Studio 5000®

New AutomationML Interface for Data Exchange



Overview

Enhance capabilities for bidirectional exchange of data between Studio 5000® and engineering tools

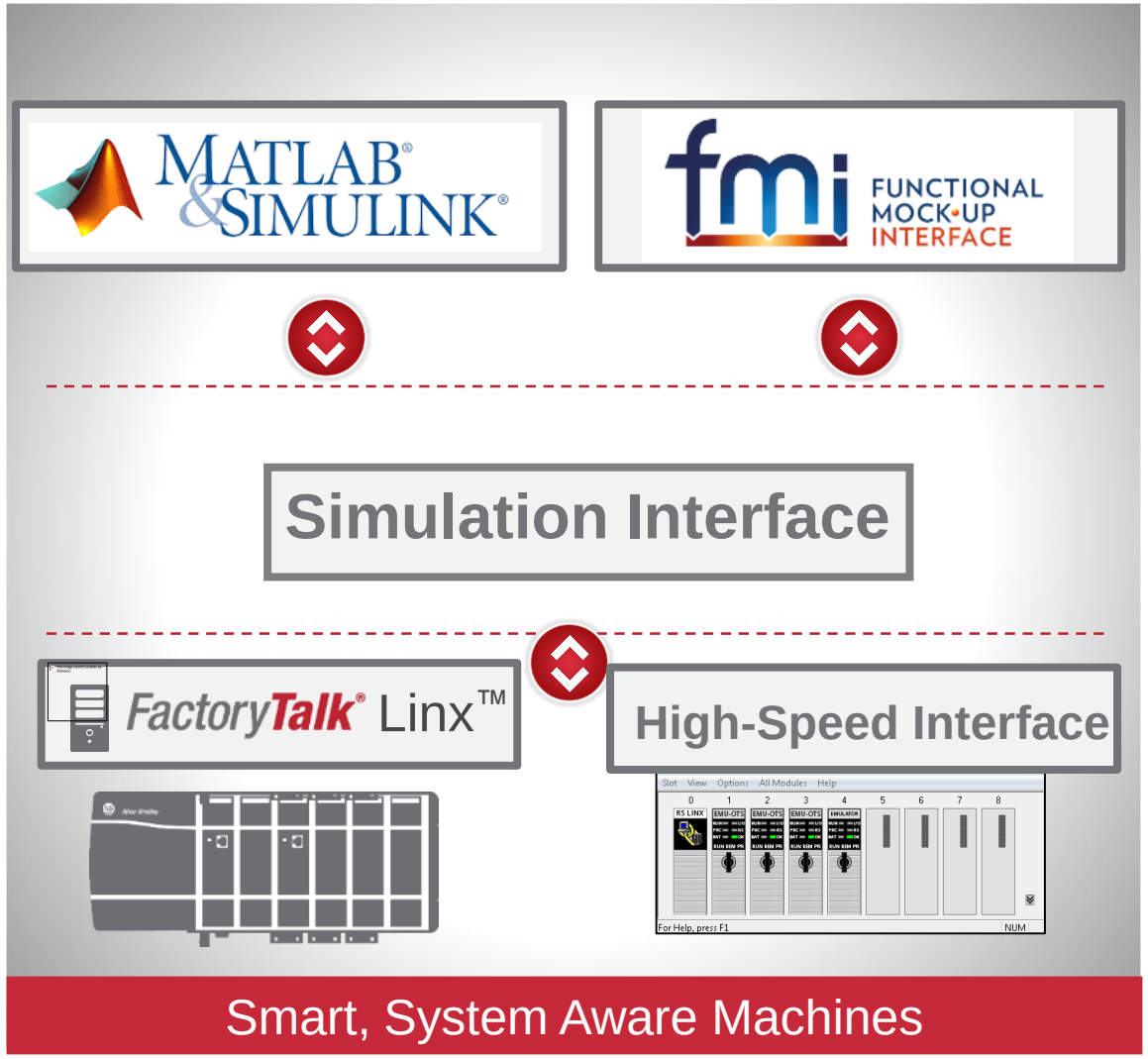
- Adoption of AutomationML for robust data exchange

AutomationML Benefits

- Scalable data exchange
- XML-based data exchange format
- International standard: IEC 62714
- Allows for a consistent data exchange along digital tool chains
- Neutral format aimed at eCAD and automation suppliers

Studio 5000® Simulation Interface

New Connectivity to Support Smart Machines and Digital Design



Overview

The Studio 5000® Simulation Interface provides a means to connect controllers, physical or emulated, to simulation of modeling tools to enable virtual commissioning, and model-based design.

Benefits

Functional Mock-up Interface (FMI) is a tool-independent standard to support both model exchange and co-simulation of dynamic models using a combination of xml-files and compiled C-code

- Design smart, system aware, self adaptive machines
- Easily design and build next generation machines with confidence
- Design, test, validate & commission machines before they are put into service

Enabling The Connected Enterprise

FactoryTalk® Linx™

Highest capacity and performance
Logix data server for Rockwell Automation® software
(delivered with FactoryTalk® Service Platform)
(Formerly RSLinx® Enterprise)

FactoryTalk® Linx™

OPC UA CONNECTOR

Provides connectivity to third-party OPC UA Servers for FactoryTalk® Software
(delivered with FactoryTalk® Service Platform)

FactoryTalk® Live Data

Provides global namespace with tag browsing and deliver of data to FactoryTalk® Software
(delivered with FactoryTalk® Service Platform)

FactoryTalk® Service Platform

FactoryTalk® Linx™ Gateway

Delivers data from FactoryTalk® Linx to third-party software via OPC DA and UA
(Formerly FactoryTalk® Gateway)

FactoryTalk® Linx™ Data Bridge

Moves data from one system data source to another across FactoryTalk® Live Data
(Bundled with FactoryTalk® Linx Gateway Professional)

RSLinx® Classic

Provides OPC DA access for third-party software, with best support for legacy control equipment

FactoryTalk® Linx™ CommDTM

Communications service for asset management of EtherNet/IP process devices

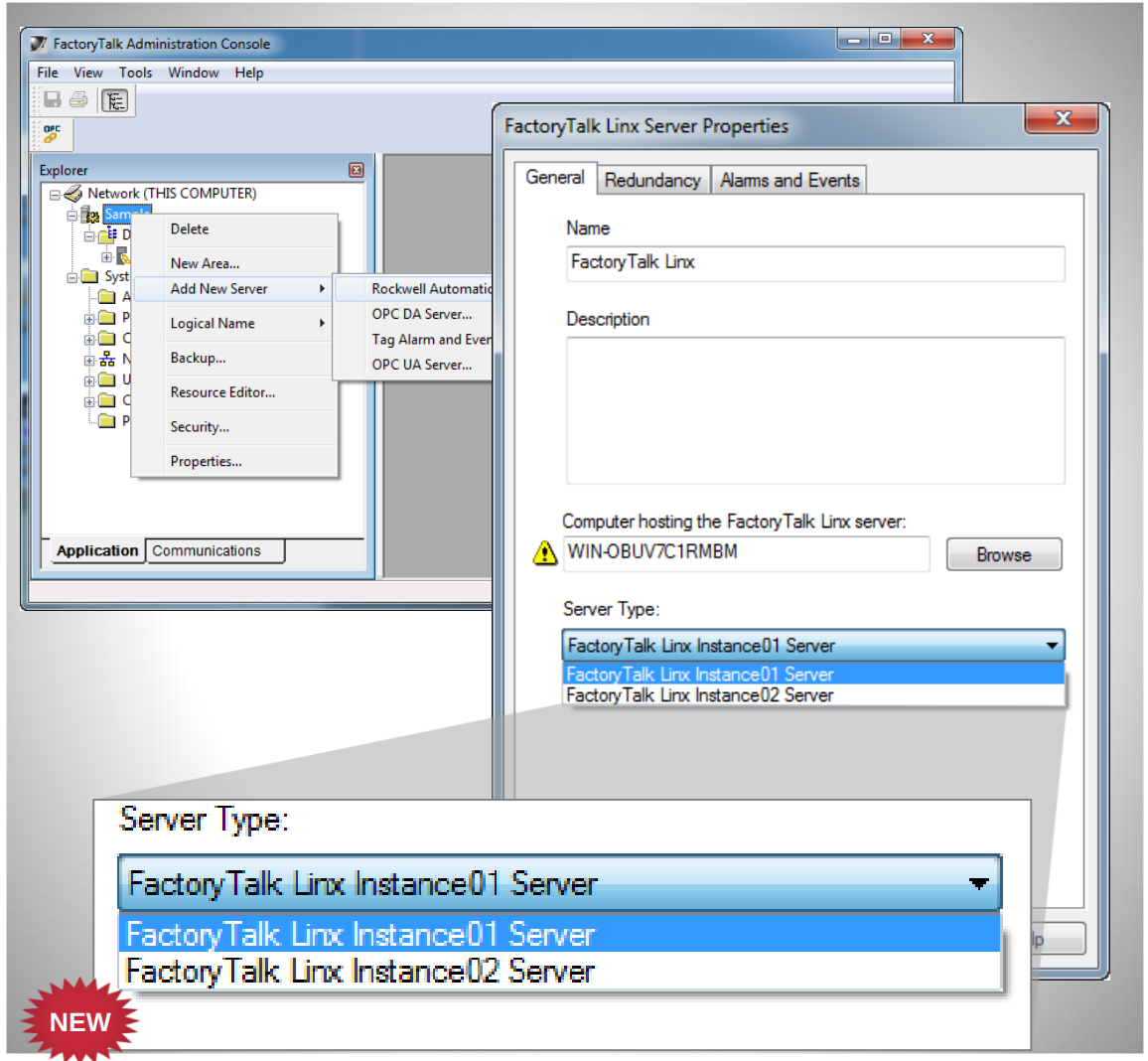
KEPServer Enterprise

Enables FactoryTalk® software to access data from third-party control equipment

FactoryTalk® Linx Dual Service Option

Doubling the Data Server Capacity

FTLGW ≥ v6.10



Overview

- FactoryTalk® Linx v6.10 provides an option to run two parallel data servers in the same workstation/VM
  - Takes advantage of modern multi-core CPUs to significantly expand capacity
  - Second instance limited to polled tags (no alarms or unsolicited messaging)
- Configured using one common user interface
- Remote administration in a distributed system

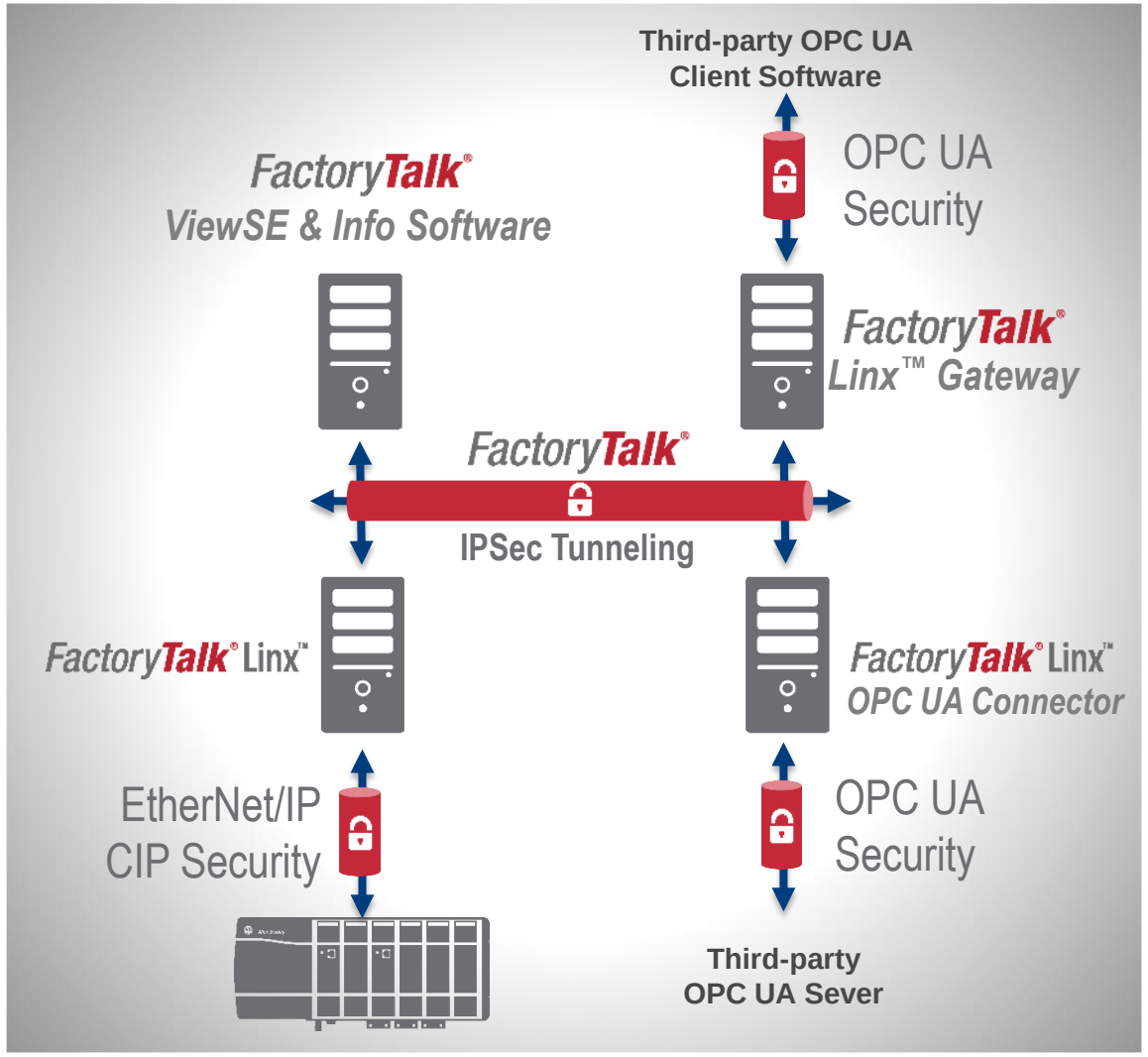
Benefits

- Add capacity without having to add additional server hardware
- Reduce the number of operating system licenses
- More efficient use of available resources

Rockwell Automation

Securing Your Automation System

Encrypted Communications



Overview

- FactoryTalk® Service Platform v3.10, FactoryTalk® Linx v6.10 and Logix Version 32 permit system-wide security capabilities
  - EtherNet/IP CIP Security for Logix 5000™ controller communications
  - IPSec Tunneling for FactoryTalk® communications between computers
  - OPC UA Security to/from third-party OPC Severs
- FactoryTalk® Security extensions to control access to configuration settings and control data value writes from external OPC UA Clients

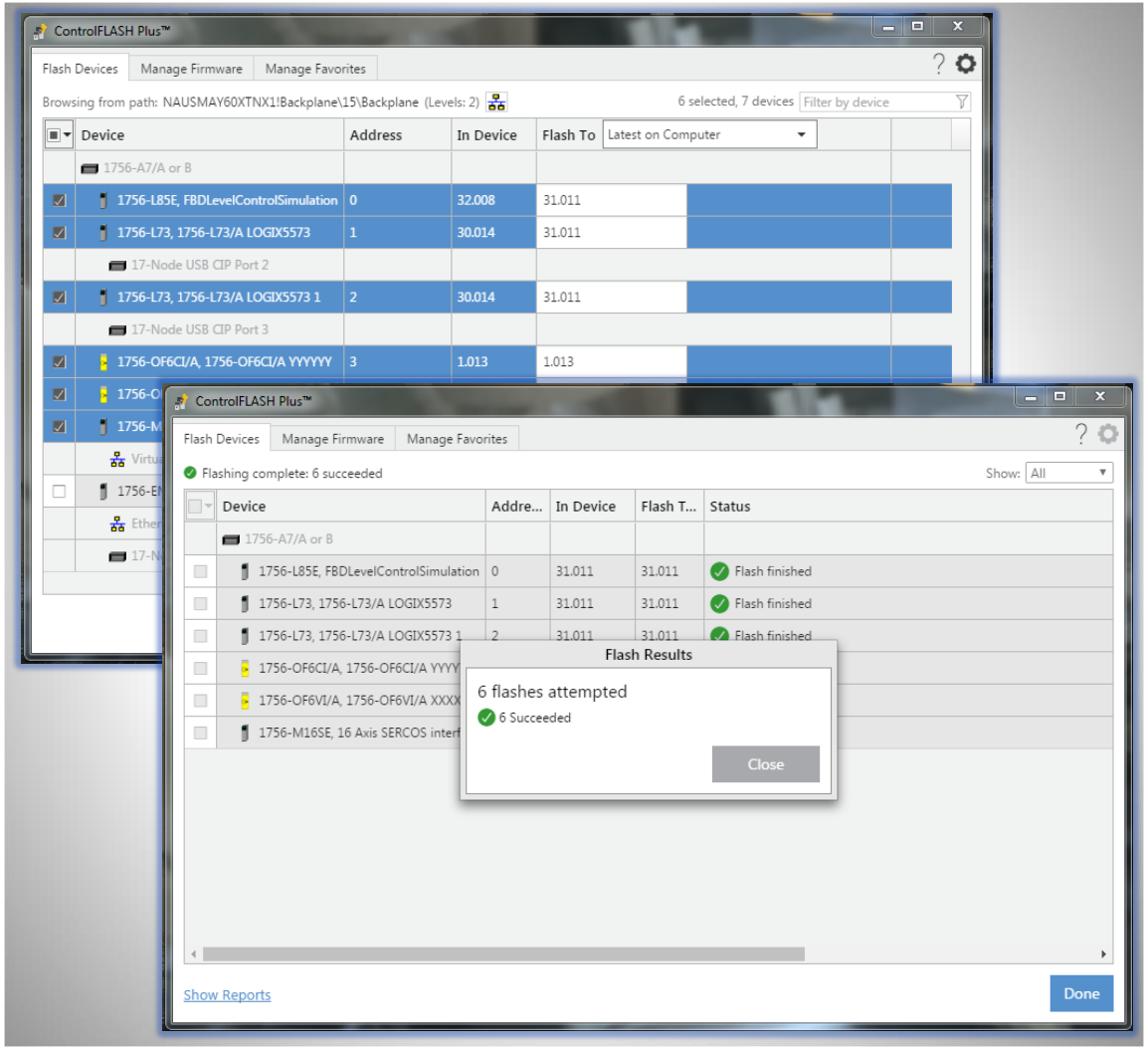
Benefit

- Data Encryption to maintain integrity of critical information
- Limits changes to authorized users

FTSP ≥ V6.10, FTL ≥ v6.10, Lgx ≥v32

ControlFLASH Plus™ V1.00 Functionality

Improved Productivity, Usability and Scalability



Overview

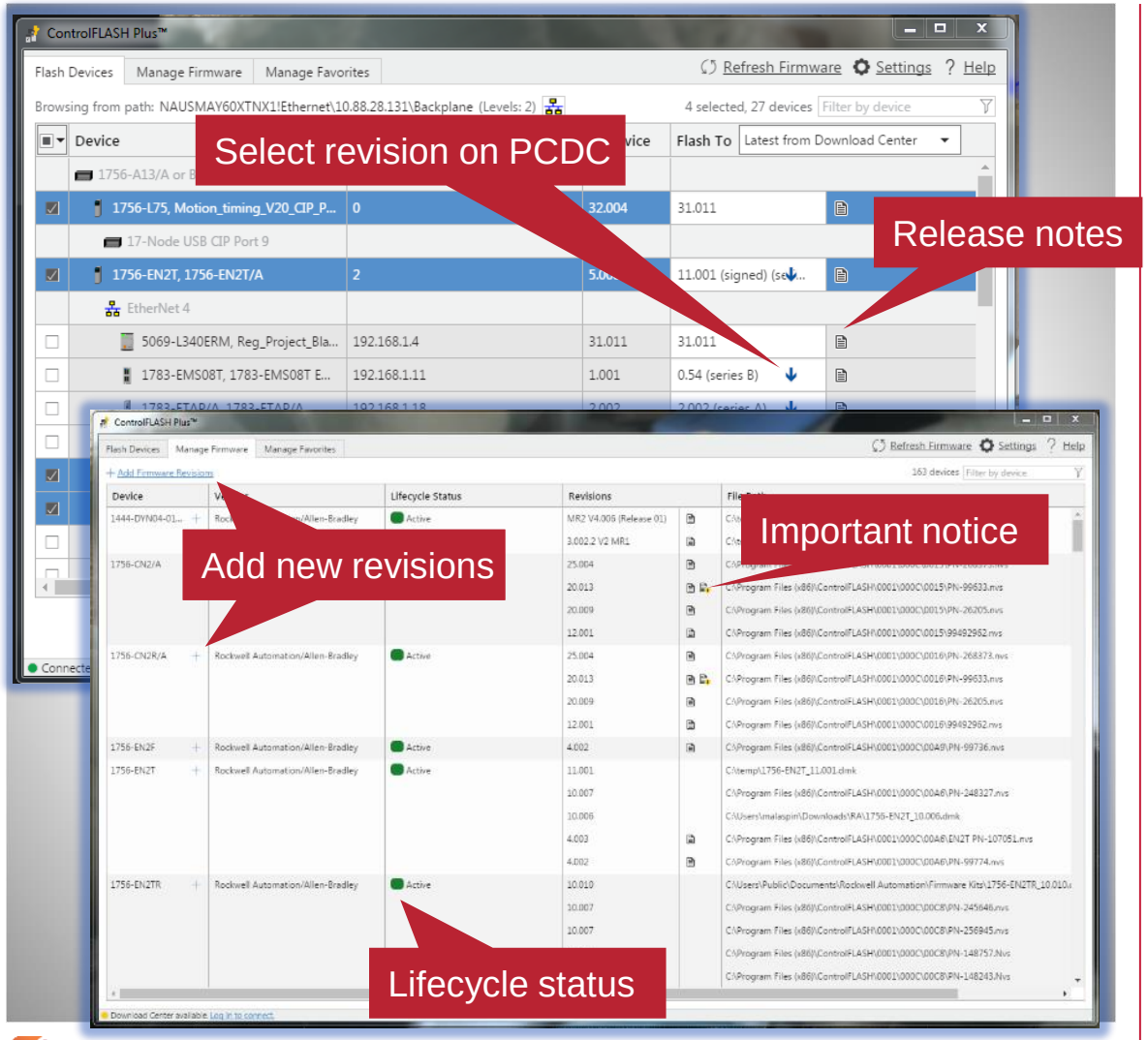
- New generation firmware update tool with a modern and simple UI for better firmware management
- Allows for multiple devices update operations
- Firmware revisions favorites support
- Leverages FactoryTalk® Linx (free of charge)

Benefits

- Improves productivity by allowing shorter time to update multiple devices
- Easily apply firmware standards
- Can coexist with ControlFLASH™ and RSLinx® Classic

Free of charge, available for download since late April, 2018

ControlFLASH Plus™ V2.00 Functionality



Overview

- Integration with Product Compatibility Download Center for firmware downloads, release notes, important notices and lifecycle status.
- Updating Micro810®and Micro820® over USB is supported when using FactoryTalk® Linx (V6.10.00 and higher)
- Install available with and without FactoryTalk® Services Platform and FactoryTalk® Linx
- Targeted by end of CY2018

Benefits

- Easier firmware lifecycle management
- Improved productivity and ease-of-use
- Can coexist with existing ControlFLASH™ and RSLinx® Classic

Rockwell Automation

Innovation & Technology Forum

Thank you