KEEPING UP TO DATE WITH ROCKWELL CONTROLLERS, VISUALIZATION, AND SOFTWARE

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John Gajor – Rockwell Automation
What’s Happening
What’s Happening

Keeping Up to Date with Rockwell Controllers, Visualization, and Software

Keep up to date with Rockwell's latest Programmable controller offerings, as well as the newest versions of Studio5000, Connected Components Workbench, and FactoryTalk View Machine Edition software.

Version 32 of Studio5000 Logix designer is the first version to offer 64 bit math, CompactLogix 5480 support, and the newest Kinetic 5706 drives. This version will also offer redundant ControlLogix processors.

Studio 5000 View Designer version 5 will allow the newest PanelView 5510 operator interfaces to communicate with multiple processors.

Version 12 of CCW brings many new features, such as PowerFlex drive trending, FactoryTalk Linx integration, and a new Logix programming theme. The new Micro808 Controller with 120 volt AC inputs is also supported in this newest version.

Version 11 of FVMAE brings an updated responsive interface for display prompts on PanelView Plus7, as well as improved integration between MobileView and PanelView Plus7 applications, and an enhanced audit message log.
STUDIO 5000
LOGIX DESIGNER V32
# Studio 5000 Design Environment

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What’s New?

V32 RELEASE SUMMARY

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

64 Bit Math

- Calculate more precise values with higher resolution
- More flexibility to comply with open/third-party communications standards

<table>
<thead>
<tr>
<th>Data Type</th>
<th>Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boolean</td>
<td>BOOL</td>
</tr>
<tr>
<td>Short Integer</td>
<td>SINT</td>
</tr>
<tr>
<td>Integer</td>
<td>INT</td>
</tr>
<tr>
<td>Double Integer</td>
<td>DINT</td>
</tr>
<tr>
<td>Real Number</td>
<td>REAL</td>
</tr>
<tr>
<td>Unsigned Short Integer</td>
<td>USINT</td>
</tr>
<tr>
<td>Unsigned Double Integer</td>
<td>UDIINT</td>
</tr>
<tr>
<td>Unsigned Integer</td>
<td>UINT</td>
</tr>
<tr>
<td>Unsigned Long Integer</td>
<td>ULINT</td>
</tr>
<tr>
<td>Long Real Number</td>
<td>LREAL</td>
</tr>
<tr>
<td>Long Integer</td>
<td>LINT</td>
</tr>
</tbody>
</table>

Supported in CompactLogix 5380, CompactLogix 5480, and ControlLogix 5580 controllers only
Logix Tag-Based Alarms

Recap from v31: Alarming Capabilities for Streamlined Workflows

- New alarming functionality in the controller
- Alarms can now be defined on “tags” or “structures” in the controller
- No need to add an instruction or additional programming
- Small memory footprint
- Supports bulk generation of alarms via XML import/export

Supported in CompactLogix 5380, CompactLogix 5480, and ControlLogix 5580 controllers only
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

Notice that tag “PV_XIC500” has five alarms
Alarm Library Management

Alarm Set Operation, View Alarm Count and Status

Alarm Set Operation (ASO): Issues a specific operation to all alarm conditions in a set

- Acknowledge
- Reset
- Enable
- Disable
- Unshelve
- Suppress
- Unsuspend
- ResetAlarmCount

<table>
<thead>
<tr>
<th>ASO</th>
<th>Alarm Set Control</th>
<th>Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>PV_XIC500.@AlarmSet</td>
<td>ASO1</td>
<td>Acknowledge</td>
</tr>
</tbody>
</table>
Studio 5000 Logix Designer Software

Simpler FBD Functions

- Faster troubleshooting with simpler user interface
- Drag and drop functions available without additional configuration
- Increased function performance leads to lower controller utilizations
- Smaller visual footprint
- No backing tag
- Symbol-based Compare/Compute/Boolean Logic Instructions

Supported in CompactLogix 5380, CompactLogix 5480, and ControlLogix 5580 controllers only
Productivity Enhancements

Rename User-defined Data Type Members and Tags on Scan

User-Defined Data Type
- Design UDT with excess memory
- Rename unused members while editing online
- Download not required

Tags on Scan
- Rename tags that are being trended by:
  - Logix Designer application
  - FactoryTalk® Linx software
  - PanelView™ 5000 HMI
Productivity Enhancements

Version 32 Updates

Trend Management: Multi-selection

• Copy/Cut/Paste
• Delete
• Export/Import
Productivity Enhancements

Version 32 Updates

Nested Delete

- Edit I/O Trees simply by deleting nested groups
Productivity Enhancements

Version 32 Updated Device Webpages

- Troubleshoot faster through upgraded device webpages that now display:
  - Safety Signature and Lock Status
  - Controller and Network Status Indicators
  - 4 Character Message Display Status

Supported in CompactLogix 5380, CompactLogix 5480, and ControlLogix 5580 controllers only
Productivity Enhancements

Version 32 Updates

Close All But This

• Minimize clicks required to streamline your workspace. Right click on tab to close all but your current tab.
Productivity Enhancements

Version 32 Updates

Function Block Wire-Jumps

- Troubleshoot more clearly with improved FBD visibility that now includes wire-jump graphics automatically at intersections.
New Data Adapter for Data Exchange

- Exchange of data between Studio 5000® software and engineering tools (AutoCAD Electrical)
- First release focuses on PLC I/O schematic diagrams and associated 2-D footprint drawings
- Auto generates drawing content in AutoCAD Electrical
- Jump starts creation of detailed drawing package
EtherNet/IP Produced/Consumed Axis

- 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 (Unicast or Multicast)

Supported in CompactLogix 5380, CompactLogix 5480, and ControlLogix 5580 controllers only
Everyone Stop

Its Demo time
CompactLogix™ 5480 Controller

New Hardware Supported With V32
Compact GuardLogix™ 5380 SIL 3

New Hardware Supported With V32

Coming Mid 2019
Kinetix® 5700 Servo Family Additions

New Hardware Supported With V32
CONNECTED COMPONENTS WORKBENCH (CCW) V11 - FEATURE PACKS
Connected Components Workbench™ Software

One Software Package for Device Configuration, Controller Programming and Integration with Human Machine Interface (HMI)
More Comfortable User Experience for Logix Users

- Add Ladder Logic using similar workflows as RSLogix 500® and Studio 5000 Logix Designer®
  - Ability to enter and modify ladder rungs quickly using ASCII Text
  - Add instructions using an Instruction Toolbar
  - “+” maps to “ADD”, “-” maps to “SUB”
Usability Enhancements

• Improved Controller Integration with Tag Import
  – All Micro800® variables can be imported with just a few steps
  – All Logix tags (L5X file) can be imported with just a few steps
  – Export and Import to Excel for easier maintenance
Scalability and Reusability At-A-Glance

Copy/Paste

OR

Converter Tool

MicroLogix™ Controllers

Micro800® Controllers
Scalability and Reusability At-A-Glance

Copy/Paste

Micro800® Controllers

CompactLogix™ 5370 Controllers
DEMO
TIME!
STUDIO 5000
VIEW DESIGNER V5
V5.0 RELEASE SUMMARY

- Expanded Controller Support
- Logix Tag-based Alarm Support
- Productivity Enhancements
Four Controllers Support

- PanelView™ 5510 terminal can now support four controllers
- PanelView™ 5310 terminal only supports a single controller
- ControlLogix® and CompactLogix™ controllers supported
- See online status of controllers
- System banner indicates if any controller has a problem
Logix Tag-Based Alarms

- Support tag-based alarms first introduced in Logix Designer V31
- Any mix of up to 1000 tag-based and instruction-based alarms from each controller are supported
- Both instruction-based and tag-based alarms appear in the alarm summary and alarm manager and are included in the alarm count rollups
Auto Logoff

- Enable auto logoff and configure a logoff time to automatically secure a terminal that is no longer in use.
- If no operator action is seen on the terminal for a length of time equal to the logout time, the current operator will be logged off.
- System tags can be used to monitor auto logoff status on the terminal.
Bindable Captions on Pop-ups

- Allow popup captions to change programmatically
- Include values, tag names, etc. along with static text using the concatenation (+) operator
- Useful to display instance tag names and descriptions for reusable popups
Drop Images, Add-on Graphics, and PDF Documents

- Drag & Drop content from the Project Explorer onto the canvas
- Automatically instantiates the Image, Add-On Graphic, or PDF Viewer
- Faster than first instantiating the viewer element and then pointing at a specific Image or PDF
KEEP CALM
ITS
DEMO
TIME
PanelView 5510

New Hardware Supported With V5
# PanelView 5000 Family Comparison

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<th>Specifications</th>
<th>PanelView 5310</th>
<th>PanelView 5510</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display Sizes</td>
<td>6”, 7 W”, 9 W”, 12 W”</td>
<td>7”, 7”W, 9 W”, 10”, 12 W”, 15”, 19”</td>
</tr>
<tr>
<td>Operator Input</td>
<td>Touch only</td>
<td>Touch (all), Navigation Button (all), Keypad (optional)</td>
</tr>
<tr>
<td>I/O</td>
<td>1 USB Host, one USB Device (programming), SD Card</td>
<td>2 USB Host, one USB Device (programming), SD Card</td>
</tr>
<tr>
<td>Enclosure Rating</td>
<td>IP65/NEMA 12/13/4x</td>
<td>IP66/NEMA 12/13/4x</td>
</tr>
<tr>
<td>Operating Environment</td>
<td>0…50°C</td>
<td>0…55°C Under 19” 0…50°C 19”</td>
</tr>
<tr>
<td>Certifications</td>
<td>c-UL-us, CE, KC, RCM, EAC</td>
<td>c-UL-us, CE, UL Class 1/Div 2, ABCD KC, RCM, EAC</td>
</tr>
<tr>
<td></td>
<td>Planned: Marine</td>
<td>Planned: Marine</td>
</tr>
<tr>
<td>Communications</td>
<td>10/100 Ethernet (Single Port)</td>
<td>10/100 Ethernet DLR (dual-port)</td>
</tr>
</tbody>
</table>
## PanelView 5000 Family Comparison

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<tr>
<th>Specifications</th>
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<th>PanelView 5510</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-Version Support</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Application Limits</td>
<td>1 controller, 50 screens, 1000 alarms</td>
<td>4 controllers, 100 screens, 1000 alarms</td>
</tr>
<tr>
<td>Resize Application on Download</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Logix tag-based Alarms</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Document and Content Viewers</td>
<td>PDF</td>
<td>PDF</td>
</tr>
<tr>
<td>Alarm log viewer</td>
<td>-</td>
<td>Yes</td>
</tr>
<tr>
<td>Video player</td>
<td>-</td>
<td>Yes</td>
</tr>
<tr>
<td>ControlLogix® Compatibility</td>
<td>ControlLogix® 5570 (v27+) / 5580 (v29+)</td>
<td>abajas</td>
</tr>
<tr>
<td>CompactLogix™ Compatibility</td>
<td>CompactLogix™ 5370 (v27+) / 5380 (v29+) / 5480 (v31+)</td>
<td></td>
</tr>
</tbody>
</table>
Flex 5000 I/O

PRP Coming March 2019

Coming March 2019
Compact 5000 Guard I/O

Coming March 2019
ArmorBlock IO-Link Hub

Coming Q1/Q2 2019
ControlFLASH Plus

V2 Functionality

Overview

- Integration with Product Compatibility Download Center for firmware downloads, release notes, important notices, and lifecycle status.

- Includes FactoryTalk® Updater Benefits

  - Improves productivity by allowing shorter time to update multiple devices
  - Firmware inventory building performance improvements (more than 60% startup reduction time).
  - Easy access to latest firmware releases and release notes for improved devices firmware lifecycle management
Time to Kahoot

Go to KAHOOT.IT on your smartphone