

PanelView 5000 HMI Terminals and Studio 5000 View Designer

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**Rockwell
Automation**

expanding human possibility™



PUBLIC

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PANELVIEW™
5310 AND 5510
HARDWARE

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DESIGNER®
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STUDIO 5000
VIEW DESIGNER
BENEFITS

PanelView 5310

A right-sized visualization solution for smaller applications

FEATURES

- Connect to one **ControlLogix®** or **CompactLogix™** processor through embedded Ethernet port
- On-screen navigation button easily displays information
- Up to 100 screens
- Five screen size options: 6", 7 W", 9 W", 10", 12 W"
- Two USB hosts, one USB device, one SD card
- c-UL-us, CE, KC, RCM, EAC, RoHS
- NEMA and UL Type 12, 13, 4X, also rated IP66 as classified by UL



PanelView 5510

Designed for OEMs and end users who require a high degree of integration between their HMI and controller

FEATURES

- Touch-only or touch+ keypad option
- Connect to as many as four ControlLogix or CompactLogix processors
- Two Ethernet ports with internal switch and device level ring (DLR) support
- Navigation button below the screen opens configurable navigation menus
- Seven screen size options: 7", 7 W", 9 W", 10", 12 W", 15", 19"
- Two USB hosts, one USB Device, one SD card
- c-UL-us listed; Class 1, Div 2, Groups A, B, C, D; KCC; CE (EMC); CE (LVD); RoHS; RCM
- NEMA and UL Type 12, 13, 4X, also rated IP66 as classified by UL; EAC, Marine
- Glossy screen for sharper graphics – **Coming soon!**



Studio 5000 automation and design environment

Studio 5000 Architect™

Studio 5000 Logix Designer®

Studio 5000 View Designer®

Studio 5000 Application Code Manager

Studio 5000 Logix Emulate™

Studio 5000 Simulation Interface™



Simplified system design and data exchange



Collaborative system programming and configuration



Integrated HMI with Logix



System reuse and project builds



Virtual design and operator training systems



Logic connection to simulation models

Studio 5000 View Designer software

Included in Studio 5000® software at no extra cost

Project explorer to organize project

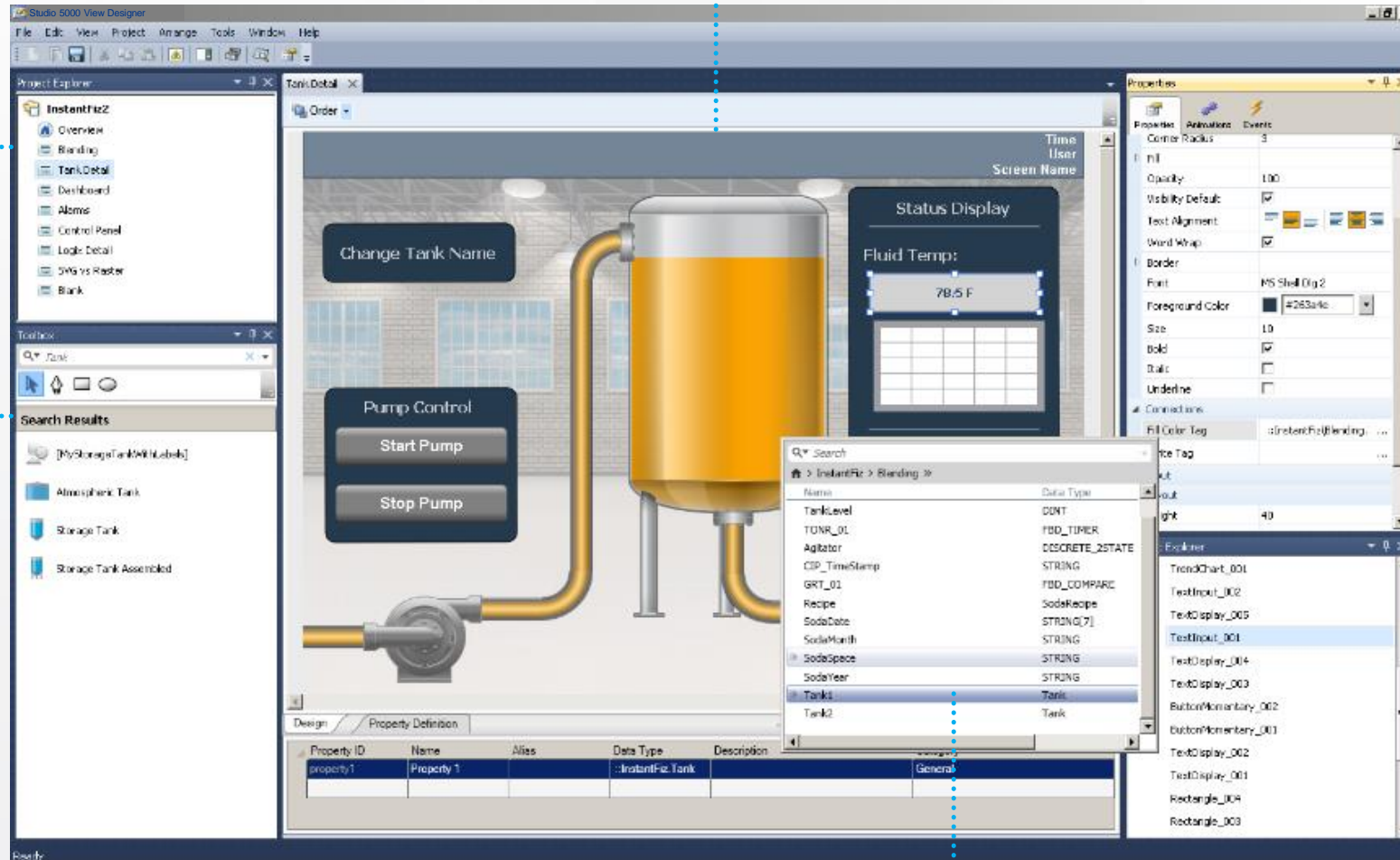
Searchable toolbox for all project elements

Graphical design of screens

Property pane to configure elements

Graphics explorer to find and select elements

Tag browser to search and select Logix tags



Engineering productivity

LOGIX INTEGRATION

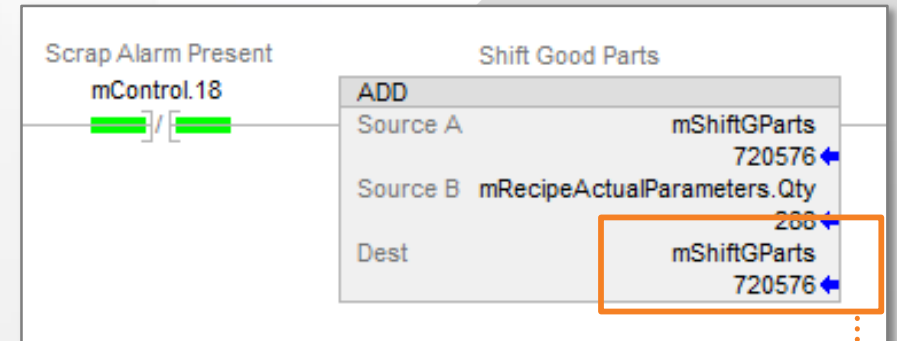
- Browse the tags in your Logix program; no need to reenter or import
- Live link between the tags in your Logix program and View Designer; if you add or change tags in Logix, View Designer automatically updates
- Direct access to extended tag properties/metadata
 - Max/min, engineering units, description, etc.



DECREASES time to develop and document



ENSURES consistency – single version of the truth



Search

MyCMX_AL > Programs > Mixer_Simple >>

Name	Data Type	Description
mScrapParts	DINT	
mShiftGParts	DINT	Shift Good Parts
mShiftSParts	DINT	Shift Scrap Parts
mShiftTParts	DINT	Shift Total Parts
mStartEnergy	REAL	This is the energy at the sta...
mStepControl	StepLogic[10]	Used for tracking steps
mSTTODINT_Storage	DINT	Internal Storage of String t...
mTargetPointer	DINT	
mTotalKG	REAL	
mTotalLBS	REAL	
mTotalParts	DINT	

Engineering productivity

LOGIX INTEGRATION OF ALARMS

- Logix tag-based alarms automatically display on the PanelView 5000 with no additional configuration
 - Logix ALMA and ALMD instructions are supported
- Build alarm messages on the fly with numeric values from the controller and extended tag properties - **New!**
- Logix alarms are displayed on configurable banner and on predefined screens
 - Alarm manager screen
 - Alarm summary screen
 - Alarm history screen - New!**
- Up to 4000 alarms per controller
- Alarm tables support configurable columns, column sorting, and filtering of alarms by many different alarm attributes
- Export alarm history to removable media for archiving and offline analysis

The image shows two screenshots from the Studio 5000 software. The top screenshot is the 'Alarm Message Editor' dialog box. It has a 'Message' field containing the text: `/*S:0 %MotorFault.@Description*/ Temp above /*S:5 %MotorTemp.@Max*/ /*S:0 %MotorTemp.@EngineeringUnit*/`. To the right is an 'Add Variable' section with a dropdown menu for 'Variable:' set to 'Select Tag Extended Properties'. Below that, 'Tag:' is set to '.MotorTemp' and 'Extended Property:' is set to '@'. A dropdown menu is open, showing options: 'Description', 'EngineeringUnit', 'Max', and 'Min'. The bottom screenshot shows the 'Alarm History' screen, which is a table with columns: Alarm, Inhibit, Event Time, Condition, Alarm Name, and Message. The table contains 15 rows of alarm data. A dotted orange line connects the 'Alarm History' button in the top screenshot to the 'Alarm History' screen in the bottom screenshot.

Alarm	Inhibit	Event Time	Condition	Alarm Name	Message
!	🔔	1/10/2020 08:06:14 PM	TRIP	...rray.@Alarms.ConveyorSta3Jam	Jam on conveyor station 3
!	🔔	1/10/2020 08:06:12 PM	TRIP	...rray.@Alarms.ConveyorSta3Jam	Jam on conveyor station 3
!	🔔	1/10/2020 08:06:08 PM	TRIP	...BOOLarray.@Alarms.M101Trip	Motor 101 tripped
!	🔔	1/10/2020 08:06:04 PM	TRIP	...BOOLarray.@Alarms.M101Trip	Motor 101 tripped
!	🔔	1/10/2020 08:05:50 PM	HI	::L85.Mixer1.@Alarms.Level_HI	Mixer Level HI
!	🔔	1/10/2020 08:05:40 PM	TRIP	...BOOLarray.@Alarms.M101Trip	Motor 101 tripped
!	🔔	1/10/2020 08:05:40 PM	TRIP	...rray.@Alarms.ConveyorSta3Jam	Jam on conveyor station 3
!	🔔	1/10/2020 08:05:36 PM	TRIP	...BOOLarray.@Alarms.M101Trip	Motor 101 tripped
!	🔔	1/10/2020 08:05:36 PM	TRIP	...rray.@Alarms.ConveyorSta3Jam	Jam on conveyor station 3
!	🔔	1/10/2020 08:05:35 PM	HIHI	::L85.Mixer1.@Alarms.Level_HIHI	Mixer level HI-HI
!	🔔	1/10/2020 08:05:15 PM	HI	::L85.TestAnalog	The speed is over 100
!	🔔	1/10/2020 08:05:07 PM	HI	::L85.TestAnalog	The speed is over 100
!	🔔	1/10/2020 08:04:52 PM	TRIP	...rray.@Alarms.ConveyorSta3Jam	Jam on conveyor station 3
!	🔔	1/10/2020 08:04:49 PM	HIHI	::L85.Mixer1.@Alarms.Level_HIHI	Mixer level HI-HI

Engineering productivity

FLEXIBLE DEVELOPMENT TOOLS FOR SCREEN DEVELOPMENT

- Configurable screen update rates allow you to optimize performance and smooth animations - **New!**
- **Auto-scaling of screens adapts graphics to any terminal size**.....
- Extensive library of smart, scalable vector graphic elements with pre-defined properties gives users a rich experience with less engineering time
- **State tables can drive graphic element behavior through up to 2500 different states (great for complex machine diagnostic displays and error codes)**.....
- Bind properties of any graphic element to any tag, any expression or any property of another element
- Any graphic element can execute commands on touch or key presses – making it easy to turn anything into a button
- Other familiar drawing functions: alignment guides, object grouping, object order
- Find and replace at any level: project, screen, or individual elements
- Project events with command triggers allow the terminal to monitor your system and act automatically



Properties

Name: TextDisplay_001
Type: TextDisplay

Properties Animations Events

StateTable_001

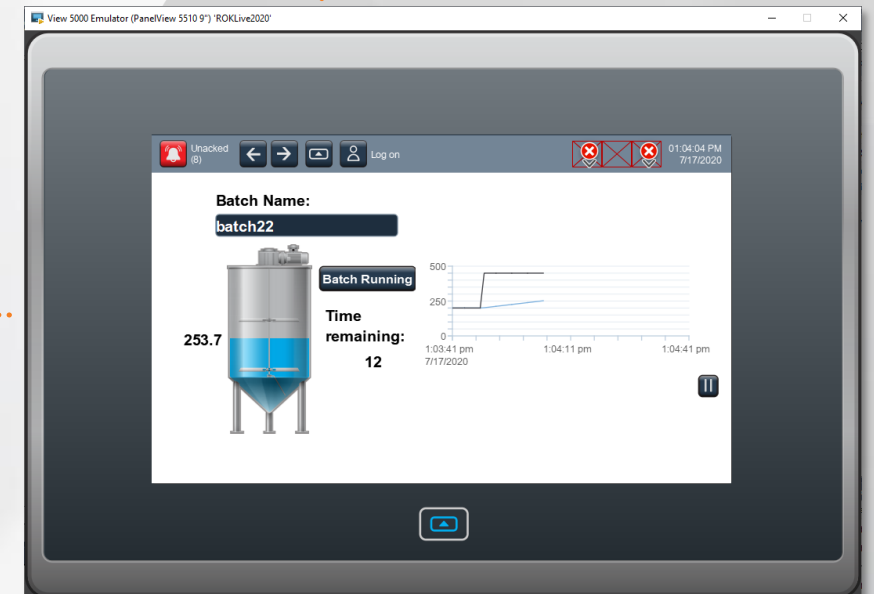
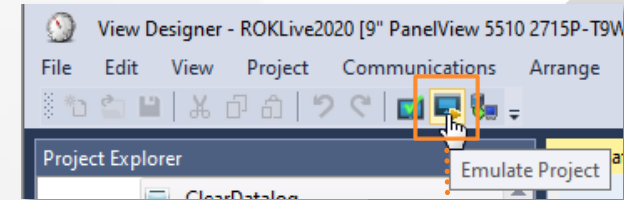
Expression:
::C1.Drive101.ErrorCode

Expression Value	State Name	Text
Default	Default	
0	State0	No Entry
1	State1	Power Loss
2	State2	Ground Fault

Engineering productivity

PROJECT ADMINISTRATION DEVELOPMENT TOOLS

- Emulate your project in your local personal computer (PC), including processor interactions without downloading it to a physical terminal
- Download to the terminal and run with just two clicks
- Upload from the terminal to View Designer to recover the entire project
- All View Designer project information contained in one .vpd file to easily move projects between computers
- Project verification with hyperlinked warnings and errors
- HMI device tags
 - Expose memory consumption, CPU bandwidth, etc.
 - Allow dynamic configuration at runtime for many settings



Engineering productivity

STANDARDIZED EXPERIENCE FOR TERMINAL USERS

- **Navigation button opens a standardized, customizable hierarchical menu bar**
 - No need to spend engineering time, screen space or terminal memory by building your own
 - Greater consistency between machines – even if they were built by different OEMs
- Language switching at runtime enables globalization – supports both pre-defined system screens and user-configured screens
- Popups for detailed displays and messaging to users
- Add-on graphics allow reuse of your customized graphic elements with tag substitution at runtime
 - Especially powerful when used with Logix user-defined data types (UDTs)
 - Changes to the add-on graphic definition automatically propagate to all instances in your project
- Banners and other system-generated pre-defined screens can be customized
- High-speed jog buttons run at I/O speed to eliminate the cost of physical pilot devices and wiring



Operational productivity

PC-LIKE FUNCTIONS – WITHOUT THE DRAWBACKS OF A PC

- Trigger email notifications to alert maintenance or engineers of conditions needing their attention
- PDF viewer can display system documentation to ease troubleshooting
- Range of screen sizes from 19" to 6" diagonal
- Data logging and trending
- Export data logs and alarm history to removable media for analysis offline
- No need for:
 - patching operating systems
 - updating apps and antivirus protection
 - system administration



Operational productivity

ROBUST, CONFIGURABLE USER SECURITY

- Define up to 500 users and place each one in a role
- Roles give access to functions, screens, or individual objects
- Log in with a password or a PIN
- **Auto-logout after a configurable duration**
- Guest role is applied when no one is logged in

The screenshot shows the 'Security Administration' window. On the left, there are two main sections: 'Users' (Create and configure user accounts) and 'Policies' (Configure policies for the target HMI device). On the right, the 'User Auto-Logoff Policies' section is active, showing a checked checkbox for 'Log off the user after a period of inactivity:' and a spinner control set to '10 minutes'. Below this, the 'User Password Policies' section is partially visible, showing 'Minimum password length:'.

The screenshot shows a search bar and a breadcrumb path: 'Local:HMIDevice > HMI Device Tags > AutoLogoff'. Below the path is a table with three columns: Name, Data Type, and Description.

Name	Data Type	Description
Delay	DINT	Duration of inactivity before logoff
Enable	BOOL	Enable automatic logoff
RemainingTime	DINT	Remaining time to elapse before logoff

Maintenance productivity

REMOTE SUPPORT ENABLEMENT

- Upload or download terminal configurations remotely even over VPN - **New!**
- User-accessible system tags for screen color adjustment/correction - **New!**
- Email notifications alert remote personnel with detailed fault diagnostics
- Virtual Network Computing (VNC) support allows remote access to the terminal – view the active screen and actuate screen objects
- Load user configuration and/or firmware from removable media without the ControlFLASH™ application *or even a PC!*

Name	Data Type	Description
BlueAdjustment	DINT	Adjust blue color of the display
CurrentScreenName	STRING	Displays the name of the screen c...
CurrentScreenUpda...	DINT	Displays the current value of the...
GreenAdjustment	DINT	Adjust green color of the display
RedAdjustment	DINT	Adjust red color of the display

Send Email	
Recipient	johndoe@gmail.com
Subject	Mixer 1 temperature warning
Message	"Current Mixer 1 temp = " + ::L85.Mixer1.Temperature
Status	::L85.EmailStatus ...

ADVANCED DIAGNOSTICS

- Automatic diagnostic indicators for network status and controller status
- Intelligent error message popups, accessible by touching the errored object, provide detailed dynamically constructed explanations of runtime errors

Maintenance productivity

CONFORMAL COATING

- New conformally coated versions on the PanelView 5310 and 5510 terminals
- Built and tested to G3 specification (ANSI/ISA S71.04-1985)
- Withstands corrosive environments, including
 - Tire and rubber
 - Chemicals and plastics
 - Oil and gas
 - Pulp and paper



AVAILABLE IN FALL OF 2020

Conclusion

Studio 5000 View Designer boosts your company's productivity across multiple dimensions

ENGINEERING PRODUCTIVITY THROUGH:

- Logix integration
- Highly flexible development tools
- Standardized experience for terminal users

OPERATIONAL PRODUCTIVITY THROUGH:

- PC-like functions without the drawbacks of a PC
- Standardized experience

MAINTENANCE PRODUCTIVITY THROUGH:

- Remote support enablement
- Advanced diagnostics
- Conformal coating



Factory automation system design software



Studio 5000® design environment



Studio 5000 View Designer



PanelView 5000 Graphic Terminals



Where do I go next?

Looking to learn more? Visit us on the web.

Thank you



www.rockwellautomation.com



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