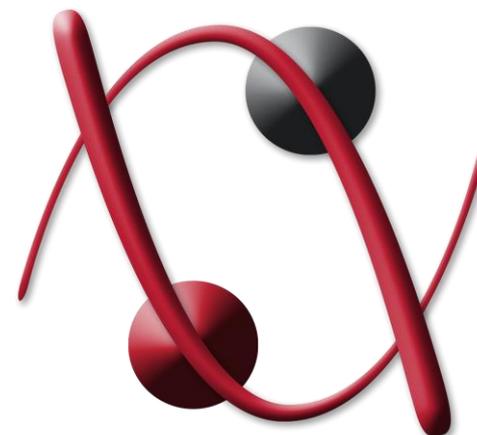LISTEN.
THINK.
SOLVE.®

Connected Components Workbench™ Software R8.00

Standard and Developer Edition

Peter Kacz

Commercial Engineer for SC and IA

PUBLIC

Allen-Bradley · Rockwell Software

Rockwell Automation

Agenda

Connected Components Workbench Overview

What's NEW in Release 8?

Connected Components Workbench™

Single Software for all your component devices

Configure

Program

Visualize

Connected Components Workbench™

Lower the cost to Design, Develop, & Deliver your machine

Rockwell Automation

- **Easy to Configure**
  - Single software package for all your essential components reduces time to create and maintain your machine design
  - PowerFlex® Drive wizards makes configuration easier
  - GuardMaster® Configurable Safety Relay editor make safety logic intuitive

- **Easy to Program**
  - Micro800® supports your choice of IEC-61131 PLC programming languages (Ladder Diagram, Function Block Diagram, Structured Text) to suit your application
  - User-defined function blocks speed machine development
  - Standard PLCopen® motion instructions with PTO Motion Axis and HSC Feedback Axis removes the complexity from simple positioning applications

- **Easy to Visualize**
  - Micro800® variable names can be directly referenced by HMI tags which results in less complexity and time-saving benefits

Connected Components Workbench™ R8.00
Workbench – Comparison of Standard vs Developer Editions

Rockwell Automation

	Standard Edition	Developer Edition
Price	Free for download or on DVD	Contact local distributor
Common Environment to configure all your common devices	Yes	Yes
Project Import/Export	Yes	Yes
Archive Manager	No	Yes
Micro800® Programming		
- IEC 61131-3 ladder diagram, function block diagram, structured text	Yes	Yes
- User Defined Function Block	Yes	Yes
- Run Mode Change	No	Yes
- User Defined Data Types	No*	Yes
- Spylist Used	Existing lists	New lists can be created
- Intellectual Property Protection	No**	Yes

"*" – requires Developer Edition to create new data types which can be used in Standard Edition.

"**"- requires Developer Edition to create passwords which can be used in Standard Edition.

- Recommended upgrade to previous releases for
  - Windows 8.x support
  - Micro800® Run Mode Change
  - New Guardmaster® 440C-CR30 Ethernet Plug-in
  - New PanelView™ 800 series of HMI's
- Standard Edition – free for download or order free DVD
- Developer Edition – contact your local distributor or Rockwell Automation salesperson
  - Individual lifetime license using FactoryTalk® Activation
  - OEM and Enterprise Toolkits with yearly activations are also supported
- Catalog Number 9328-CCWDEVxxE
  - xx ➔EN-English, PT-Portuguese, FR-French, IT-Italian, DE-German, ES-Spanish, ZH-Chinese (non-English versions available approximately 3 months after English)

Agenda

Connected Components Workbench Overview

What's NEW in Release 8?

- **Standard Edition**
    - Project Import/Export makes sharing and copying project easier
    - Unattended Installation to automate installation on large numbers of PCs
    - Full Windows 8.0 and 8.1 support including Micro810® USB Driver
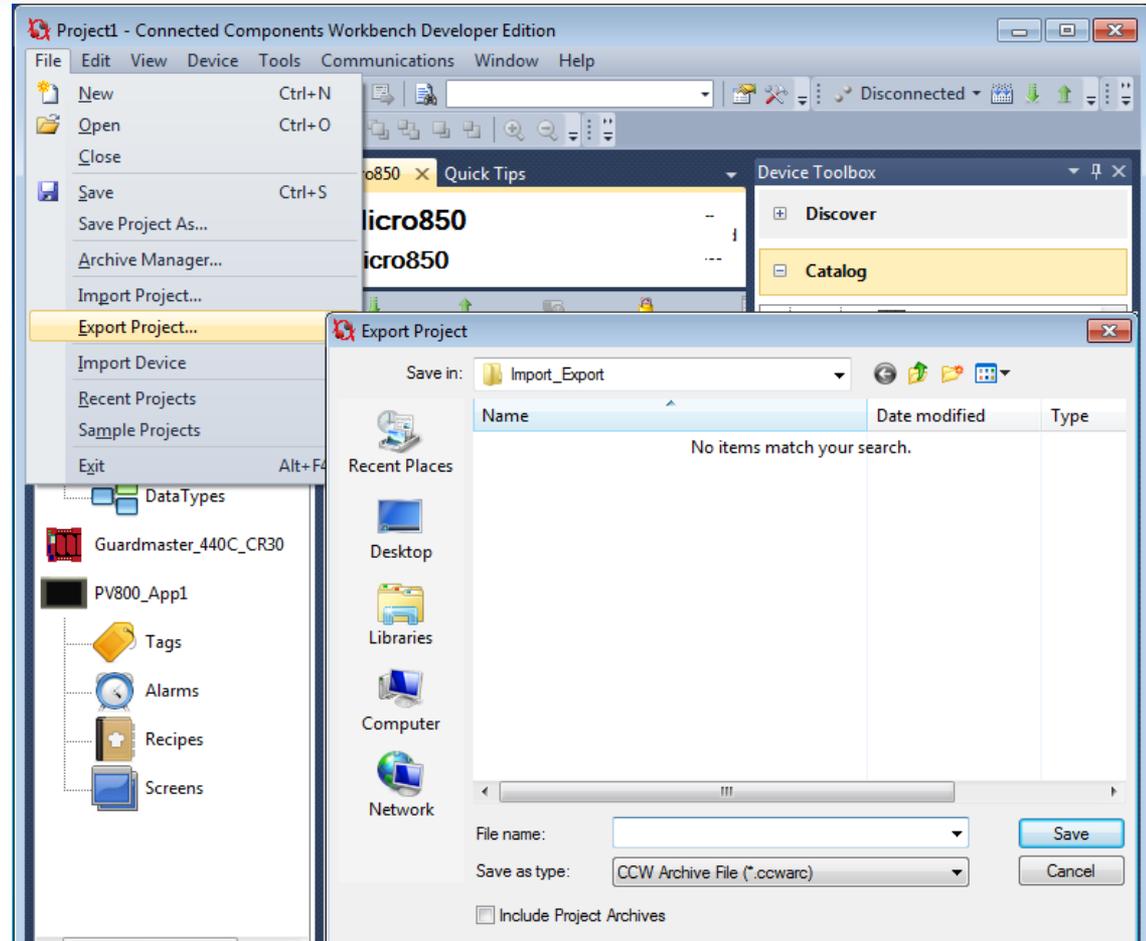
- **Developer Edition**
    - Archive Manager helps to track changes to the project with a timestamp and description
    - Run Mode Change

Connected Components Workbench™ R8.00

Workbench – Project Export/Import

- Project Export/Import
- Compresses entire project to single file
  - File extension .ccwarc
- Easy to email or share using thumb drive

Connected Components Workbench™ R8.00
Workbench – Unattended Installation

- Allows large scale installations to be automated without user input
- IT departments have more control over the roll out of SW releases
- Setup.exe /? for command line help

```
Z:\Share Folder for File exchanges\CCW R8\8.00.00-CCW-Std-DVD>setup/?

Z:\Share Folder for File exchanges\CCW R8\8.00.00-CCW-Std-DVD>

Connected Components Workbench 8.0 Setup
Copyright (c) 2015 Rockwell Automation Technologies, Inc.
All Rights Reserved.

Usage:
    Setup /Q /AcceptAllLicenseItems   [/UserName=user_name]
         [/Organization=organization_name] [/SerialNumber=serial_number]
         [/AutoRestart]

    All parameters are not case sensitive. If a parameter value includes
         space or special character, mark the parameter value by double
         quotation marks.

Examples:

1. Install Upgrade Edition. Setup will auto restart when
   the installation is done.

    Setup /Q /AcceptAllLicenseItems /AutoRestart

2. Install Developer Edition. Setup will accept the Serial Number
   if the specified serial number is valid and the computer will restart
   automatically if needrequired.

    Setup /Q /AcceptAllLicenseItems /SerialNumber=0123456789 /AutoRestart

3. Install Standard Edition. Setup displays a restart dialog that prompts you to

   restart the computer when there is a reboot requirement.

    Setup /Q /AcceptAllLicenseItems
```

- Windows 8.0 and 8.1 fully supported in Release 8
- R7 supports Windows 8.0 and 8.1 except for Micro810®

Release 7 Release Notes

Operating System Requirements

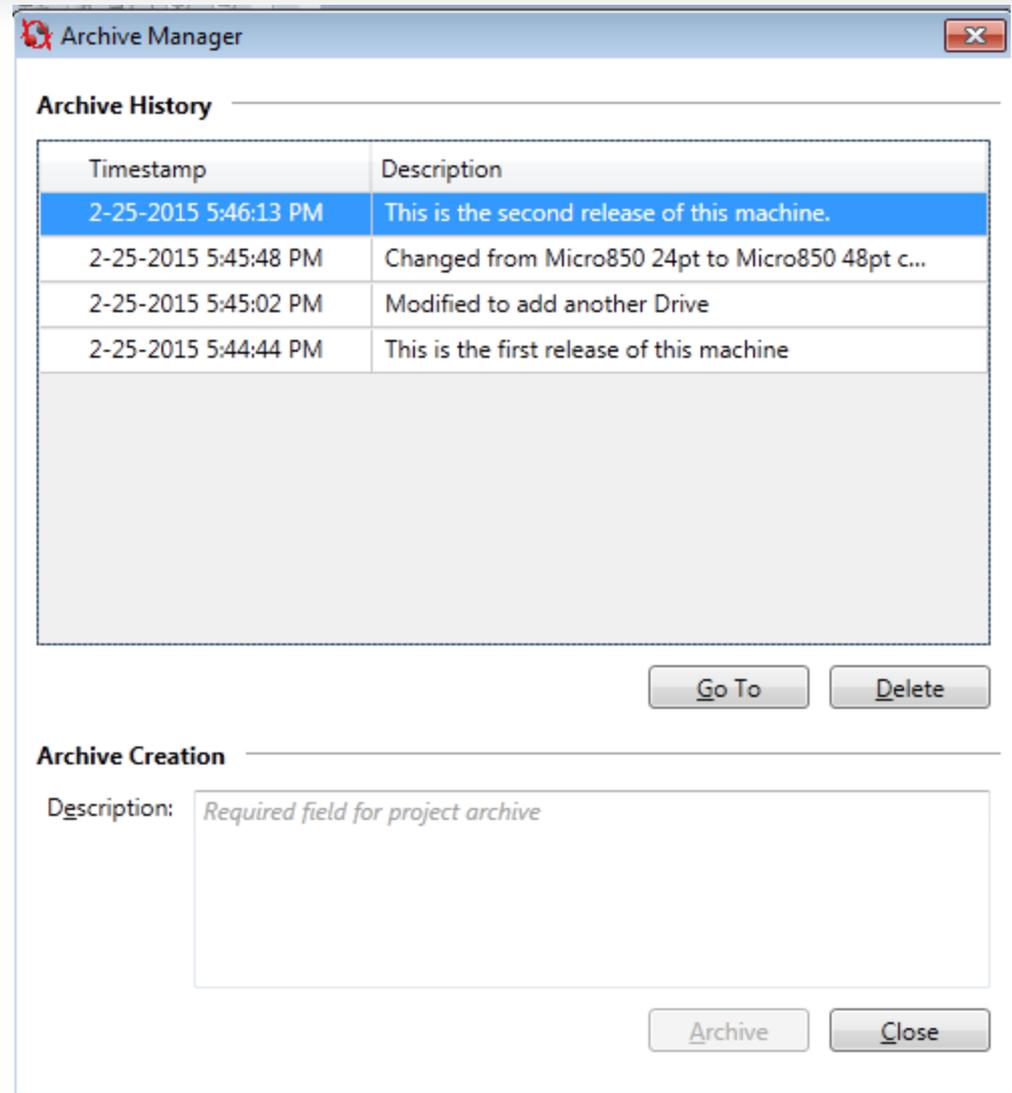This release is supported on the following operating systems:

- Microsoft Windows® 7 (32-bit and 64-bit)
- Microsoft Windows® 8 and 8.1 (32-bit and 64-bit)
  Note: Not recommended for use with the Micro810 due to USB Adapter driver. Driver will be updated in Release 8.
- Microsoft Windows 2008® (R2)

Connected Components Workbench™ R8.00

Workbench – Developer Edition Archive Manager

- Archive Manager helps you to track changes to your project with Timestamp and Description

- Easily view all revisions to the project

- Go To any archive revision quickly and easily

- Project Export/Import has the option to also include all archive revisions and compress to a single file for sharing

Archive Manager dialog:

Archive History

Timestamp	Description
2-25-2015 5:46:13 PM	This is the second release of this machine.
2-25-2015 5:45:48 PM	Changed from Micro850 24pt to Micro850 48pt c...
2-25-2015 5:45:02 PM	Modified to add another Drive
2-25-2015 5:44:44 PM	This is the first release of this machine

Go To   Delete

Archive Creation

Description: *Required field for project archive*

Archive   Close

Connected Components Workbench™ R8.00
Micro800® – Overview

- **Simplified Debugging – No more Debug Mode**
  - Immediately can monitor variables and logic after connecting to controller
- **Run Mode Change**
  - Make small logic changes while connected to the controller in Run Mode
  - Requires Developer Edition
- **Motion Feedback Axis with 2080-MOT-HSC plug-in**
  - Supports motion instructions. No more UDFBs for motion feedback applications
- **DeviceNet Pass-through and Diagnostics**
  - Makes debugging DeviceNet network easier
- **Bit Access of Integer Array Elements**
- **Flash update firmware from microSD card**
- **Secure Variable Access**
  - Prevent access to global variables over a CIP network

Rockwell
Automation

- Use Run Mode Change (RMC) to make small changes to program logic without going to Program mode, Building, and Downloading
  - Can add/modify POUs and UDFBs in all languages (LD, FBD, ST) up to RMC memory limitations
  - Make changes in Remote Run or Program Mode
  - Cannot change controller configuration
- Saves time debugging programs
  - Controller variable values are preserved and program execution continues while making changes to the program logic
  - Able to Test Logic while in RMC mode and then decide to permanently Accept or Undo Changes
- Memory Diagnostics page enhanced to allow monitoring of RMC memory usage
- Developer Edition required
  - Only supported by Micro820™/830/850 controllers

TOOLBAR

TOOLBAR STATE

Typical Workflow
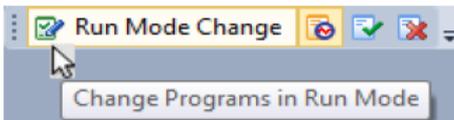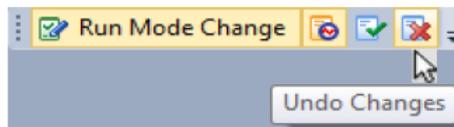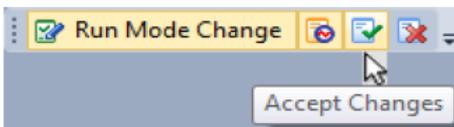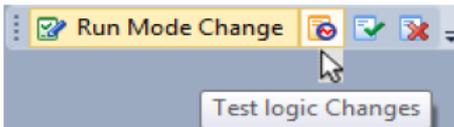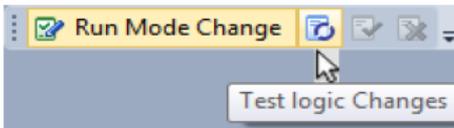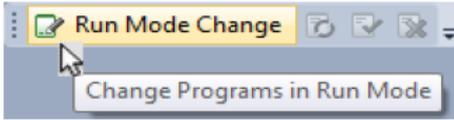
| ACTION	DESCRIPTION
Enter RMC	Indicates that Run Mode Change is not currently being performed. Click to enter Run Mode Change to make edits to program logic in design mode while connected to the controller. If disconnected from controller, CCW will first connect to the controller.
Test Logic	Indicates that changes are detected in the program logic due to a Run Mode Change. Click to Test Logic Changes. CCW will build the project. If successful, CCW will enter debug mode to allow monitoring your program. Otherwise CCW will stay in design mode.
More Changes	Indicates that Test Logic Changes have been successfully performed. Click to return to design mode and make more changes to the program logic.
Accept Changes	Indicates that Test Logic Changes have been successfully performed. Click to Accept all changes and stay connected to the controller in debug mode.
Undo Changes	Indicates that Test Logic Changes have been successfully performed. Click to Undo all Changes for this RMC session and stay connected to the controller in debug mode.
Abrupt Exit	Indicates that Run Mode Change is in progress but user wants to exit RMC abruptly. Click to exit Run Mode Change. It is recommended to either Accept or Undo Changes. Otherwise controller will be left in Run Mode Change with uncommitted changes.

- Motion Function Blocks supported for 2080-MOT-HSC Plug-in for easier programming
  - Eliminates need for feedback axis UDFBs. (UDFBs still required for high speed counting)
- Verify position of motion PTO axis and servo drive encoder feedback (e.g. web pull)
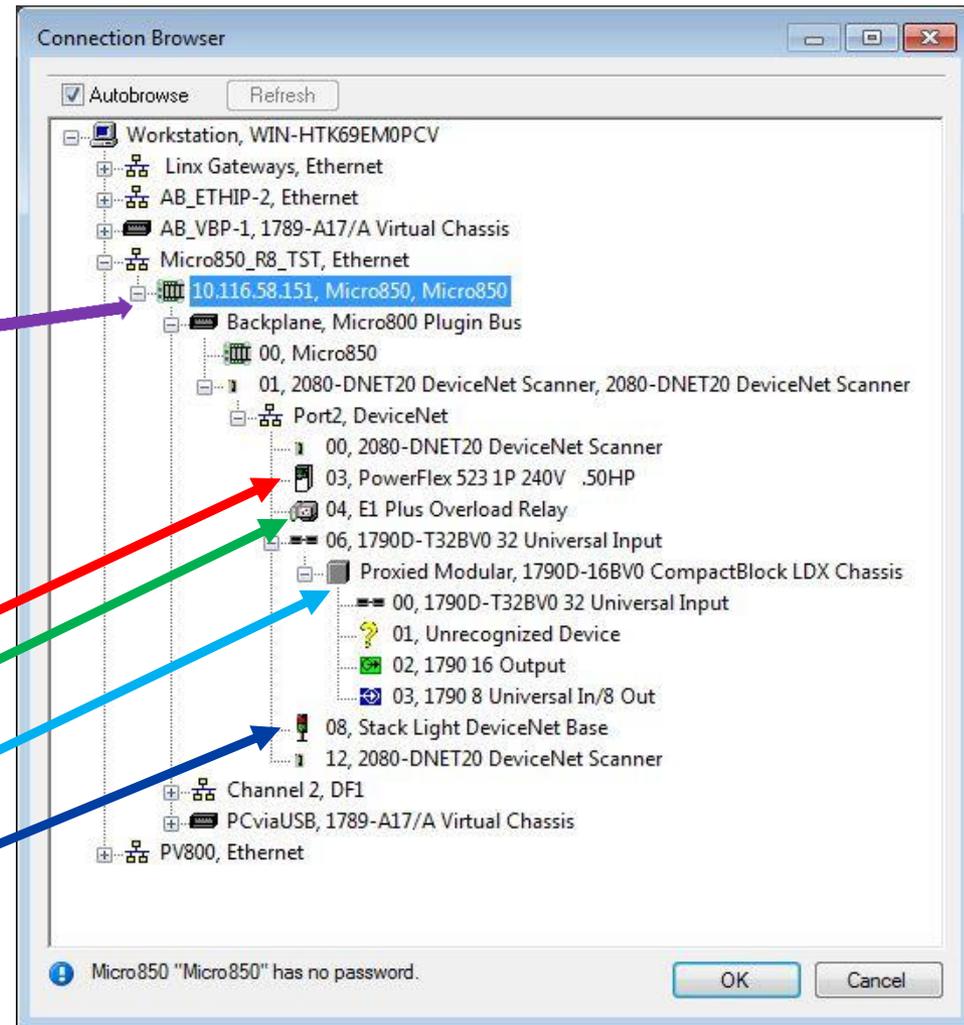- Retrieve speed and position information on a feedback axis (e.g. conveyor)
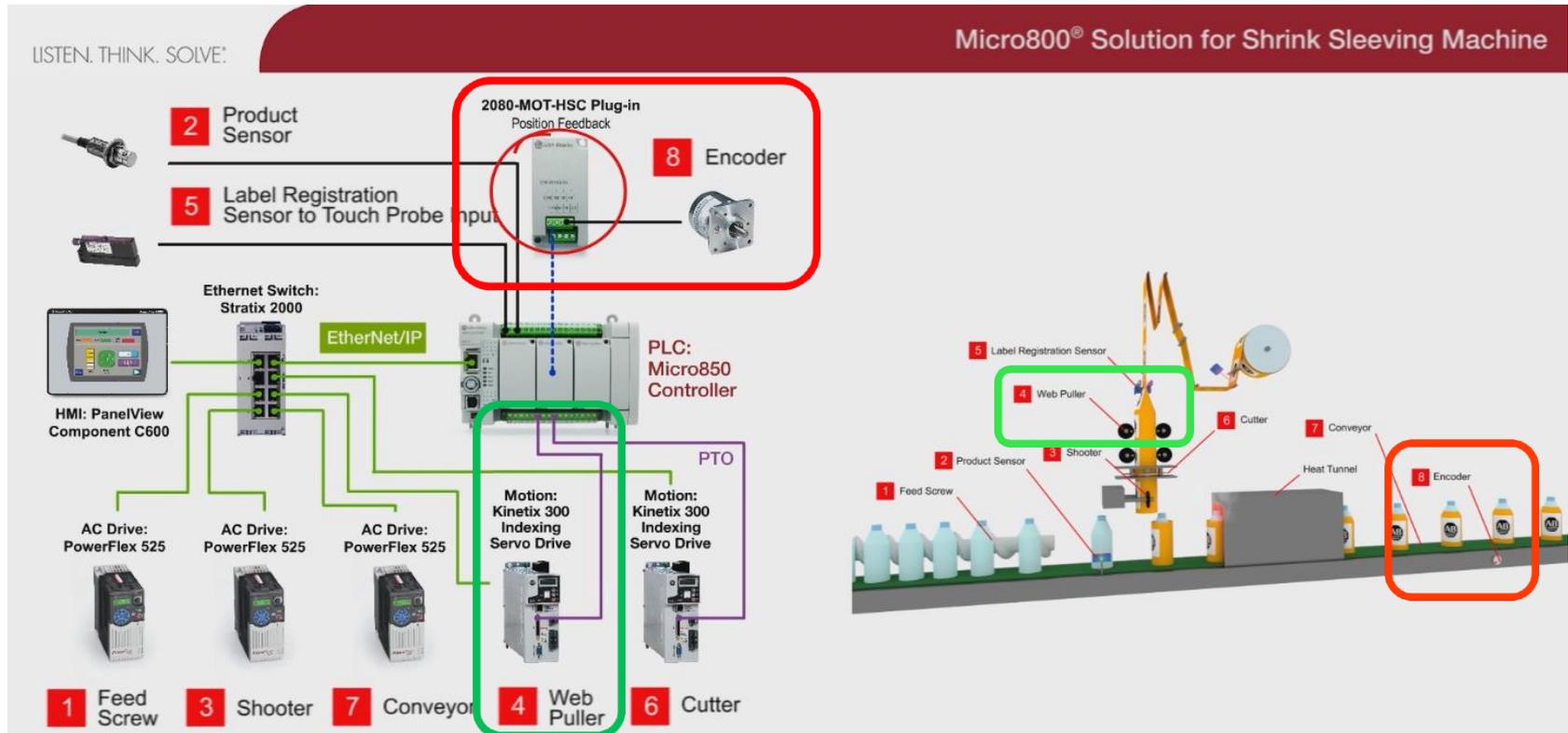
Micro800® Solution for Shrink Sleeving Machine

- **No need for additional linking devices or gateways for CCW to configure devices on DeviceNet**
  - Micro820™
  - Micro830®
  - Micro850®

- **User can browse from PC's USB or Ethernet port through the Micro800® controller directly to DeviceNet using RSLinx**
  - PowerFlex® Drives
  - E1 Plus Overload
  - CompactBlock LDX
  - Stack/Tower Light

Connection Browser

☑ Autobrowse   Refresh

- Workstation, WIN-HTK69EM0PCV
  - Linx Gateways, Ethernet
  - AB_ETHIP-2, Ethernet
  - AB_VBP-1, 1789-A17/A Virtual Chassis
  - Micro850_R8_TST, Ethernet
    - 10.116.58.151, Micro850, Micro850
      - Backplane, Micro800 Plugin Bus
        - 00, Micro850
        - 01, 2080-DNET20 DeviceNet Scanner, 2080-DNET20 DeviceNet Scanner
          - Port2, DeviceNet
            - 00, 2080-DNET20 DeviceNet Scanner
            - 03, PowerFlex 523 1P 240V .50HP
            - 04, E1 Plus Overload Relay
            - 06, 1790D-T32BV0 32 Universal Input
              - Proxied Modular, 1790D-16BV0 CompactBlock LDX Chassis
                - 00, 1790D-T32BV0 32 Universal Input
                - 01, Unrecognized Device
                - 02, 1790 16 Output
                - 03, 1790 8 Universal In/8 Out
            - 08, Stack Light DeviceNet Base
            - 12, 2080-DNET20 DeviceNet Scanner
      - Channel 2, DF1
      - PCviaUSB, 1789-A17/A Virtual Chassis
  - PV800, Ethernet

ⓘ Micro850 "Micro850" has no password.   OK   Cancel

Micro800® – DeviceNet Diagnostics

- DeviceNet Diagnostics page has diagnostics beyond what's available in RSLinx browsing and in a more user-friendly format

- Scanner Information

- Device OK

- Device Faulted

- Nodes that are out of range of the scanner (Scanner + 20 nodes)

- Allows array of integers to contain Boolean data such as for Alarms

- Makes it easier to convert MicroLogix programs (using physically addressed integer data files) to Micro800® (symbolic variables)

- Example: DATAX[10].5 ➔ references bit 5

    Previously had to move the integer to a temporary variable

    DATAX_TMP.5 to reference bit 5

- Note: Not supported by Micro810® since no FW R8 release

Connected Components Workbench™ R8.00

Micro800® – Flash update from microSD card

- No need to use ControlFlash utility on a PC to update FW in controller

  - Enabled in ConfigMeFirst.txt file

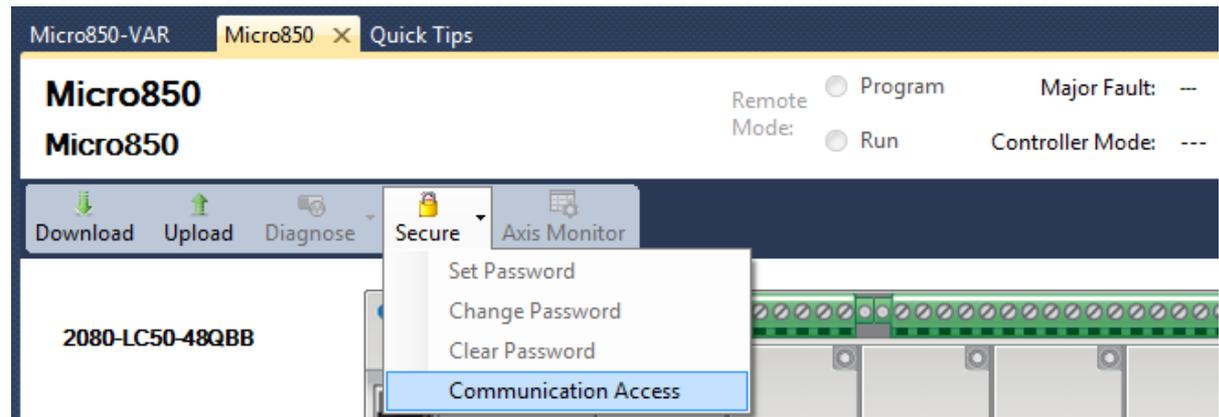- Utility provided to copy the ControlFlash FW files from PC to the microSD card

  - Accessible from Tools menu
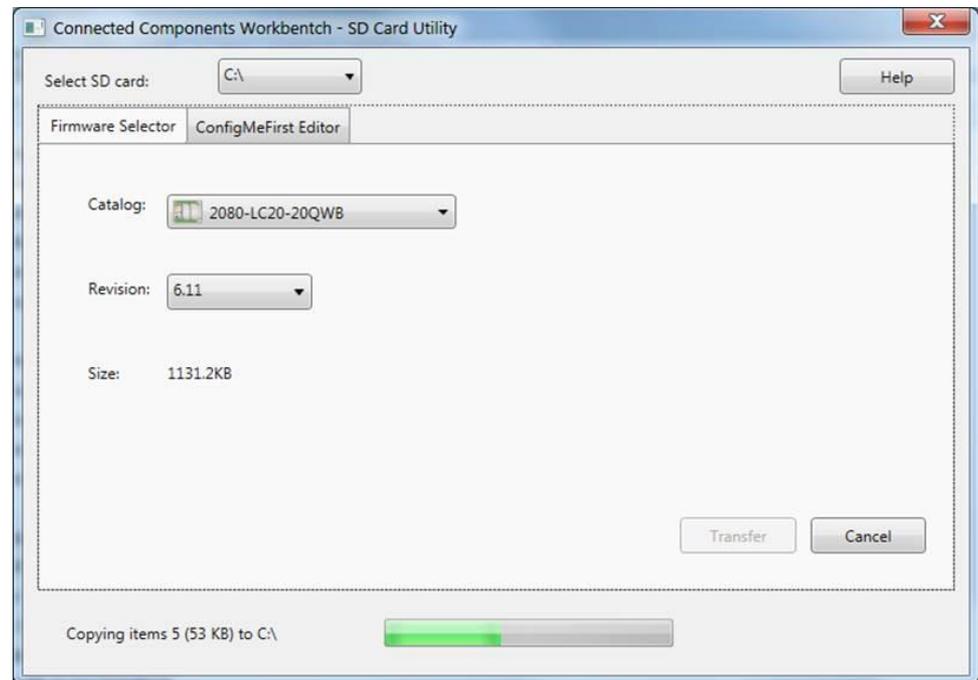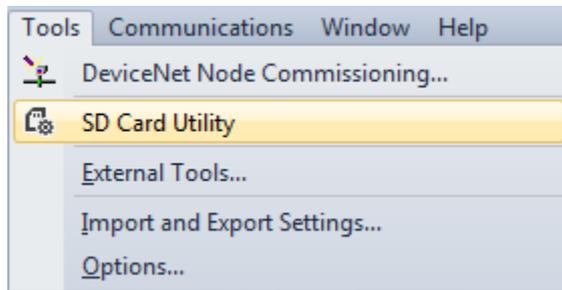
- Ability to restrict read/write access to global variables over a CIP network
  - Currently the default is to allow read/write access to global variables
- Use to make communications to the controller more secure
  - Restrict HMI or other controller access

Name	Alias	DataType	Communication	Comment
Diag_Data		DINT	Read	
Output_Data		DINT	No Access	

No Access
Read/Write
Read

- Access from controller page or device menu

Micro850-VAR   Micro850 ✕   Quick Tips

Micro850
Micro850

Remote Mode: ○ Program   Major Fault: ---
                ○ Run   Controller Mode: ---

Download Upload Diagnose Secure Axis Monitor

2080-LC50-48QBB

Set Password
Change Password
Clear Password
Communication Access

- Workbench Release 8.00 (or higher) required to support PanelView™ 800

  - DesignStation 8.00 (or higher)

- Easily migrate PanelView™ Component applications using Change Graphic Terminal

  - PanelView ™Component applications are compatible with PanelView™ 800 terminals but it is recommended to use the Change Graphic Terminal feature due to screen size, resolution, and color differences especially with 7" and 10"

- Additional Industrial Symbols available to make screens more representative of actual machine

- RSLinx® Classic support. Browse Ethernet network and download easier

  - Able to take advantage of Micro800 pass-through. Download USB ➔ Ethernet.

- Enhanced Recipe function

- ControlFLASH® utility supported to update FW

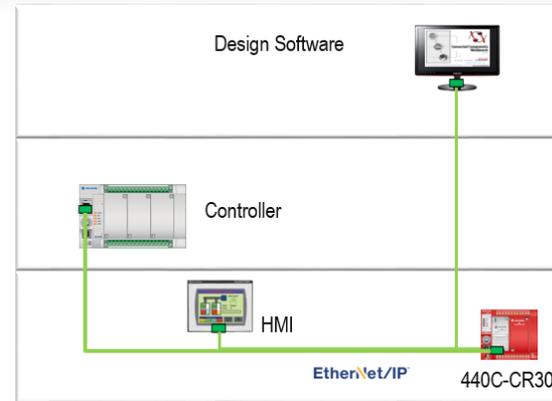- Larger alphanumeric keypad to reduce mistakes when entering values

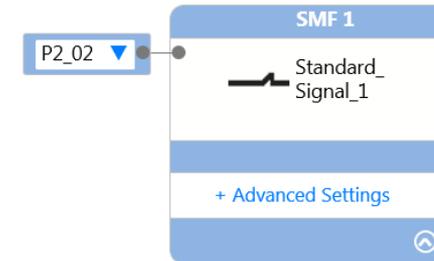- **New 440C-ENET Ethernet Plug-in module**

  - Share diagnostics with Micro820™/850 controllers over an EtherNet/IP network
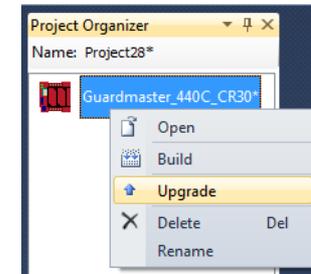

440C-ENET Plug-in

- **New Standard Signal function block**

  - Allows you to use standard-rated signals from plug-ins or the communications network as interlocks in your application logic

- **Project Upgrade**

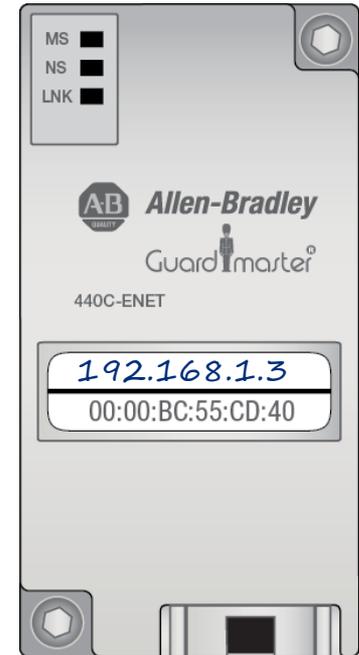 - Upgrade version 6 or 7 440C-CR30 safety relay projects to latest revision 8
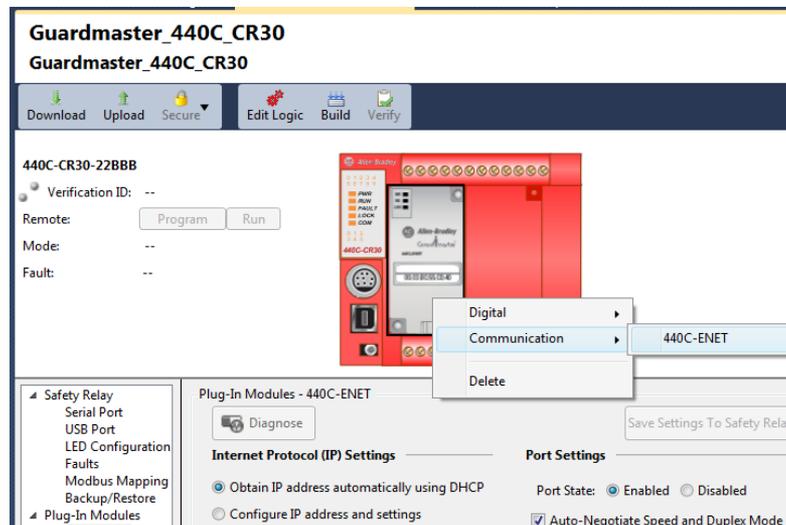
- Configure and Monitor 440C-CR30

- Troubleshoot 440C-CR30 safety system on HMI or in automation controller with diagnostic information shared over EtherNet/IP

- Share standard Control signals between automation controller and 440C-CR30 safety relay (resets, feedback, etc.)
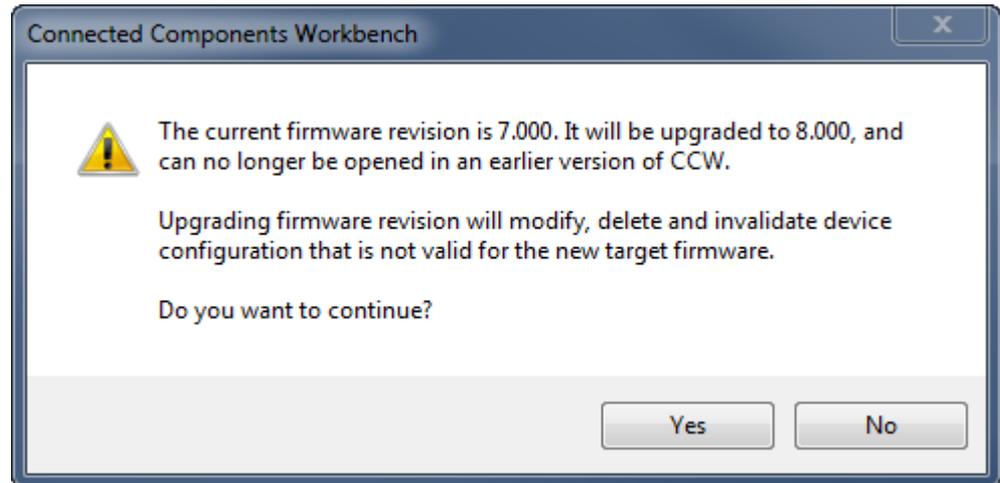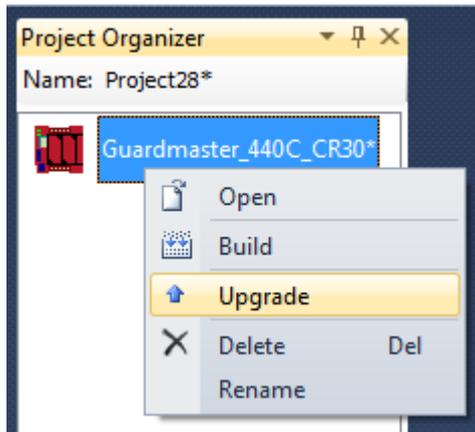
440C-ENET Plug-in

- **New Standard Signal Safety Monitoring Function.**

  - Allows you to easily use standard rated signals from plug-ins or the communication network in your application logic
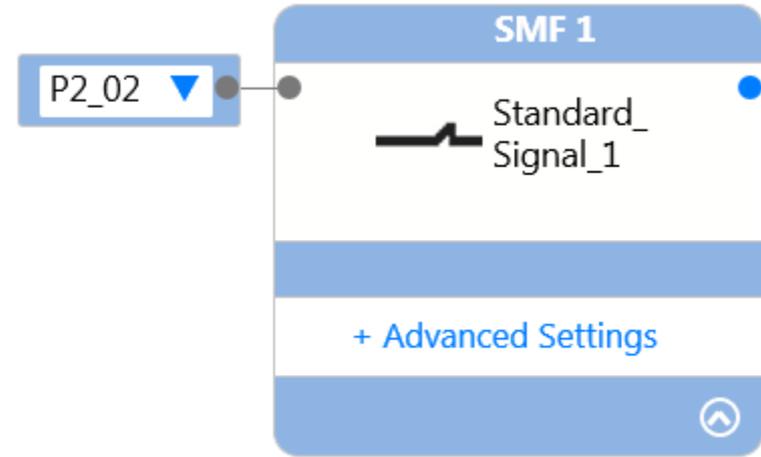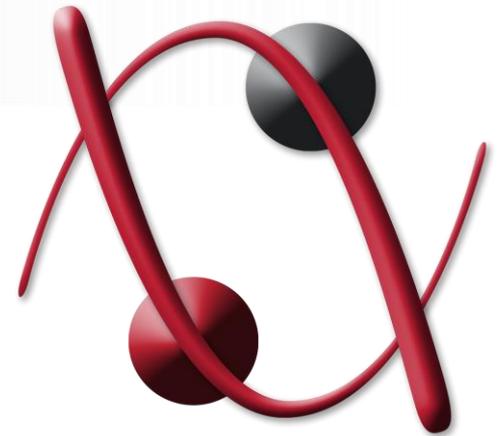
- Upgrade project to latest version for latest features
  - Upgrade version 6 or 7 projects to the latest version 8
  - Right-click on 440C-CR30 in Project Organizer to Upgrade

Project Organizer ▼ ⊣ ✕

Name: Project28*

Guardmaster_440C_CR30*

📄	Open	
🖼	Build	
⬆	Upgrade	
✕	Delete	Del
	Rename	

Connected Components Workbench ⚠️

⚠️ The current firmware revision is 7.000. It will be upgraded to 8.000, and can no longer be opened in an earlier version of CCW.

Upgrading firmware revision will modify, delete and invalidate device configuration that is not valid for the new target firmware.

Do you want to continue?

[Yes] [No]

LISTEN.
THINK.
SOLVE.®

Questions?

PUBLIC

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