



**THE REYNOLDS  
COMPANY**  
ELECTRICAL SUPPLY

# Tech Talk

**MicroLogix Controllers to Micro800 Controllers Migration**  
**February 10, 2021**

# Our Guest Panelists

Joe Belaschky  
Automation/Network Specialist  
Houston

Mike Masterson  
Automation Specialist  
Houston

# 2021 Online Events - Register to receive a calendar invite

- **Tech Talks**

- **Fiber Optic Cable Selection**

February 24<sup>th</sup> @ 10 AM

- **Building Faceplates in View ME/SE**

March 10<sup>th</sup> @ 10 AM

- **HART and Highly Integrated HART**

March 24<sup>th</sup> @ 10 AM

- **User Groups**

- **Networking Update with Panduit**

February 17<sup>th</sup> @ 10 AM

- **Scalable OEE**

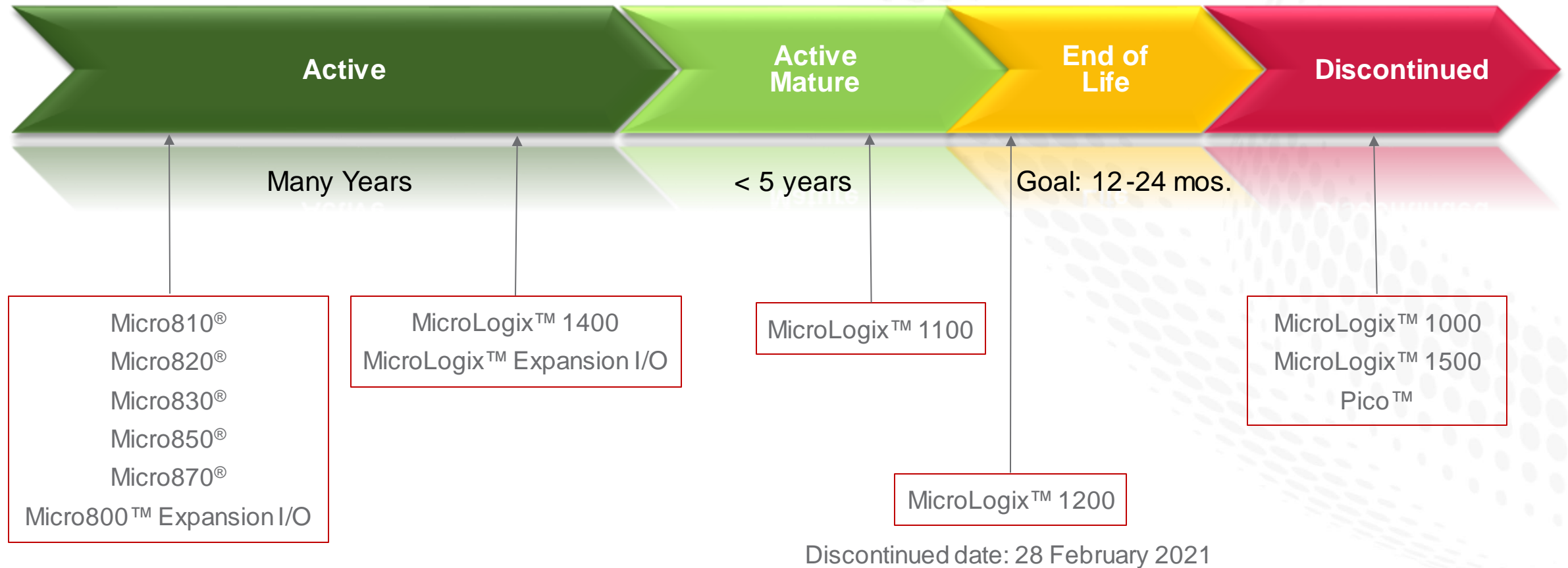
March 17<sup>th</sup> @ 10 AM

[reynoldsonline.com](https://reynoldsonline.com)

# Understanding the product lifecycle



# Micro programmable logic controllers: product lifecycle updates



# Product lifecycle webpage

Allen-Bradley | Rockwell Software

Rockwell Automation

Industries Capabilities Products News Events Sales & Partners Support

Product Lifecycle Status

## PRODUCT LIFECYCLE STATUS

Search by catalog number (e.g. 1771 or 1771-IC)

We know it's critical for you to maximize your investment in your automation system, and we support that with a track record of long product lifecycles relative to our competition. But the Industrial Internet of Things and Smart Manufacturing are changing the way you do business and driving you to evolve. We help you meet this demand to innovate, including clearly identifying a product's current lifecycle stage, making it easier for you to proactively plan and manage the transition to more modern technologies.

Use this search tool to identify the most contemporary Rockwell Automation products, bringing you advancements in performance, flexibility, and security that enable you to achieve a Connected Enterprise and a competitive edge.

For the most up-to-date lifecycle status on products you are interested in, enter the catalog number on the Search line above:

- You must enter at least 3 digits of the catalog number and an optional wildcard string to retrieve data.
- You can enter a partial catalog number to get lifecycle data on a family of products (e.g., enter "1771" to retrieve status information on all 1771 I/O products).

## LIFECYCLE STATUS DEFINITIONS

- Active:** Most current offering within a product category.
- Active Mature:** Product is fully supported, but a newer product or family exists. Gain value by migrating.
- End Of Life:** Discontinued date announced - actively execute migrations and last time buys. Product generally orderable until the discontinued date.<sup>1</sup>
- Discontinued:** New product no longer manufactured or procured.<sup>2</sup> Repair/exchange services may be available.

<sup>1</sup>Outages on specific items may occur prior to the Discontinued date.

<sup>2</sup>Limited stock may be available in run-out mode, regionally.

Search by catalog number  
<http://rok.auto/productstatus>

FILTER & REFINE

Lifecycle Status Replacement Category Sort

20 RESULTS

● <b>1761-L20BWB-5A</b> - MICROLOGIX 1000 20 POINT CONTROLLER			
LIFECYCLE STATUS DISCONTINUED	DISCONTINUED DATE 06/30/2017	REPLACEMENT CATEGORY Engineering Replacement	REPLACEMENT PRODUCT MICRO820 & CCW PROGRAMMING SW

FILTER & REFINE

Lifecycle Status Replacement Category Sort

4 RESULTS

● <b>1764-24AWA</b> - MICROLOGIX 1500 24 POINT CONTROLLER			
LIFECYCLE STATUS DISCONTINUED	DISCONTINUED DATE 06/30/2017	REPLACEMENT CATEGORY Functional Replacement	REPLACEMENT PRODUCT MICROLOGIX 1400

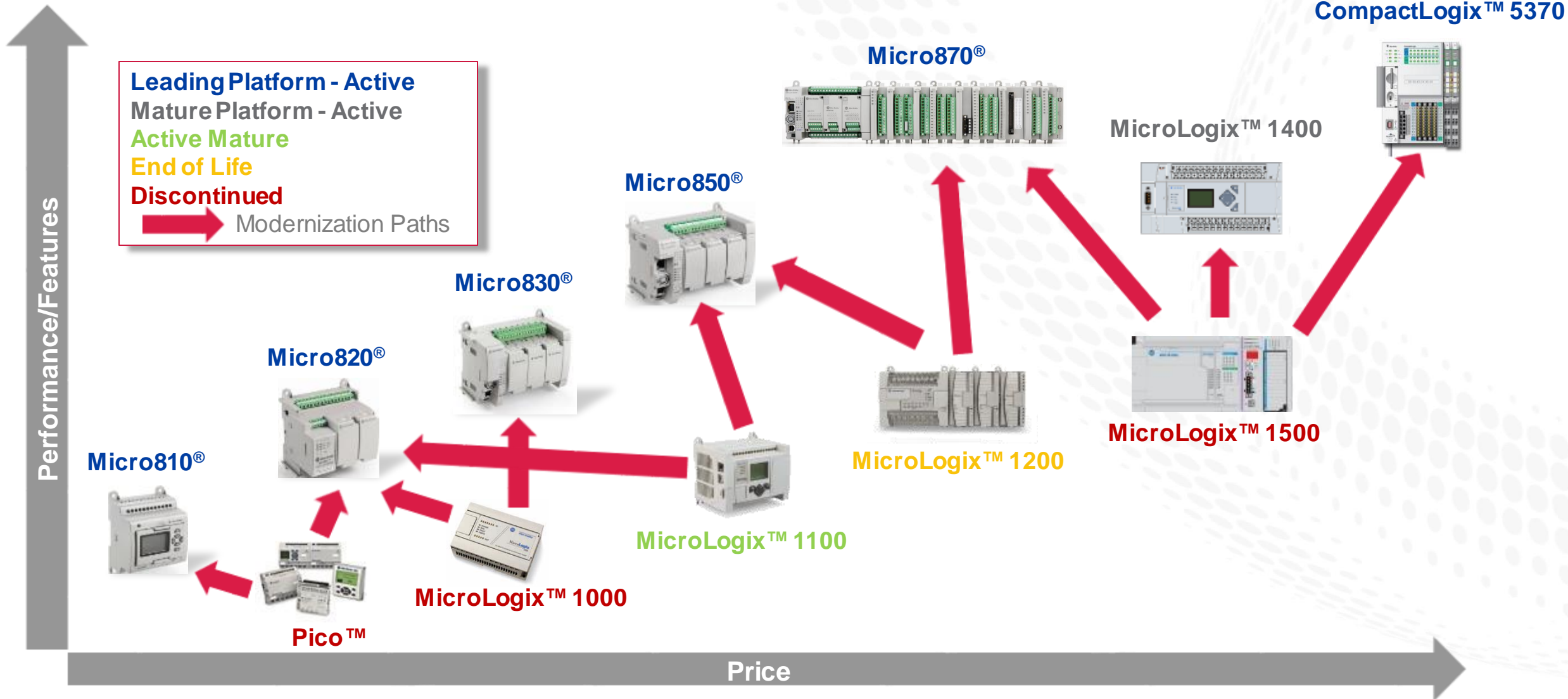
FILTER & REFINE

Lifecycle Status Replacement Category Sort

11 RESULTS

● <b>1762-L24AWA</b> - MICROLOGIX 1200 24 POINT CONTROLLER			
LIFECYCLE STATUS ACTIVE MATURE			
● <b>1762-L24AWAR</b> - MICROLOGIX 1200 24 POINT CONTROLLER			
LIFECYCLE STATUS ACTIVE MATURE			
● <b>1762-L24BWA</b> - MICROLOGIX 1200 24 POINT CONTROLLER			
LIFECYCLE STATUS ACTIVE MATURE			

# Modernize your machines to Micro800™ controllers

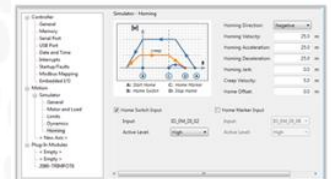


# Benefits of migrating to Micro800™ controllers

- **Greater flexibility with Micro800™ controllers**
  - Plug-in modules allow customers to customize the Micro800™ controller to suit the application, without increasing the controller footprint
- **Ease of connection to a network using Micro800™ controllers with built-in RS-232/RS-485 serial port and Ethernet port**
  - No need for 1761-NET-AIC to connect to an RS-485 serial network
  - No need for 1761-NET-ENI to connect to an Ethernet network
- **Symbolic addressing for tags improves readability of user program**
  - CIP Symbolic works better with Logix controllers
  - PCCC addressing in MicroLogix™ controllers is less readable
- **Native PLCopen motion instructions and Motion Profile in Micro800™ controllers** reduces programming time for simple position control applications
  - MicroLogix™ controllers do not support Motion Instructions and Motion Profiles
- Reduced development time through reuse of codes using **user-defined function block (UDFB)**
  - UDFB is similar to Add-On Instruction in Logix Designer application
  - RSLogix 500® software and MicroLogix™ controllers do not have a UDFB equivalent feature
- Ease of programming with choice of **three programming languages (LD, FBD, ST)** to suit application requirements
- **Connected Components Workbench™ software is a single software development environment** for programming the controller, visualization and configuring drives and safety components
  - Micro800™ tag names can be directly referenced by PanelView™ 800 tags, which result in time-saving benefits



EtherNet/IP™





# MicroLogix™ 1000 controller migration



MicroLogix™ 1000



Micro820®

OR



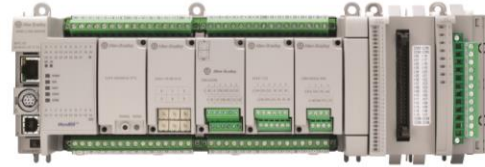
Micro830®

- MicroLogix™ 1000 controller lifecycle status
  - Product discontinued since July 2017
- Recommended migration path
  - Migrate MicroLogix™ 1000 controller to Micro820® controller or Micro830® controller
  - If the application requires communication on DH-485 or DF-1 network, then migrate MicroLogix™ 1100 controller to MicroLogix™ 1400 controller
- Migration tools
  - MicroLogix™ to Micro800™ Converter tool v5.00 supports conversion of MicroLogix™ 1000 project to a Micro800™ project
  - MicroLogix™ Migration Wizard in [Integrated Architecture® Builder \(IAB\)](#) tool
  - MicroLogix™ Controllers to Micro800™ Controllers Migration Guide, Publication [2080-RM002](#)

# MicroLogix™ 1100 controller migration



MicroLogix™ 1100



Micro850®

OR



Micro820®

- MicroLogix™ 1100 controller lifecycle status
  - Current status: Active Mature
- Recommended migration path
  - Migrate MicroLogix™ 1100 controller to Micro850® controller or Micro820® controller
  - If the application requires communication on DH-485 or DF-1 network, then migrate MicroLogix™ 1100 controller to MicroLogix™ 1400 controller
- Migration tools
  - MicroLogix™ to Micro800™ Converter tool v5.00 supports conversion of MicroLogix™ 1100 project to a Micro800™ project
  - MicroLogix™ Migration Wizard in [IAB](#) tool
  - MicroLogix™ Controllers to Micro800™ Controllers Migration Guide, Publication [2080-RM002](#)

# MicroLogix™ 1200 controller migration

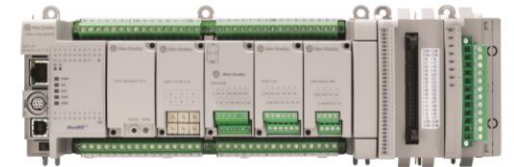


MicroLogix™ 1200



Micro870®

OR



Micro850®

- MicroLogix™ 1200 controller lifecycle status
  - Current status: End of Life
  - Discontinued date: 28 February 2021
- Recommended migration path
  - Migrate MicroLogix™ 1200 controller to Micro870® controller or Micro850® controller
  - If the application requires communication on DH-485 or DF-1 network, then migrate MicroLogix™ 1200 controller to MicroLogix™ 1400 controller
- Migration tools
  - MicroLogix™ to Micro800™ Converter tool v5.00 supports conversion of MicroLogix™ 1200 project to a Micro800™ project
  - MicroLogix™ Migration Wizard in [IAB](#) tool
  - MicroLogix™ Controllers to Micro800™ Controllers Migration Guide, Publication [2080-RM002](#)

# MicroLogix™ 1500 controller migration



MicroLogix™ 1500



Retain  
Compact I/O™  
(1769)



CompactLogix™ 5370  
L1Y or L2Y

OR



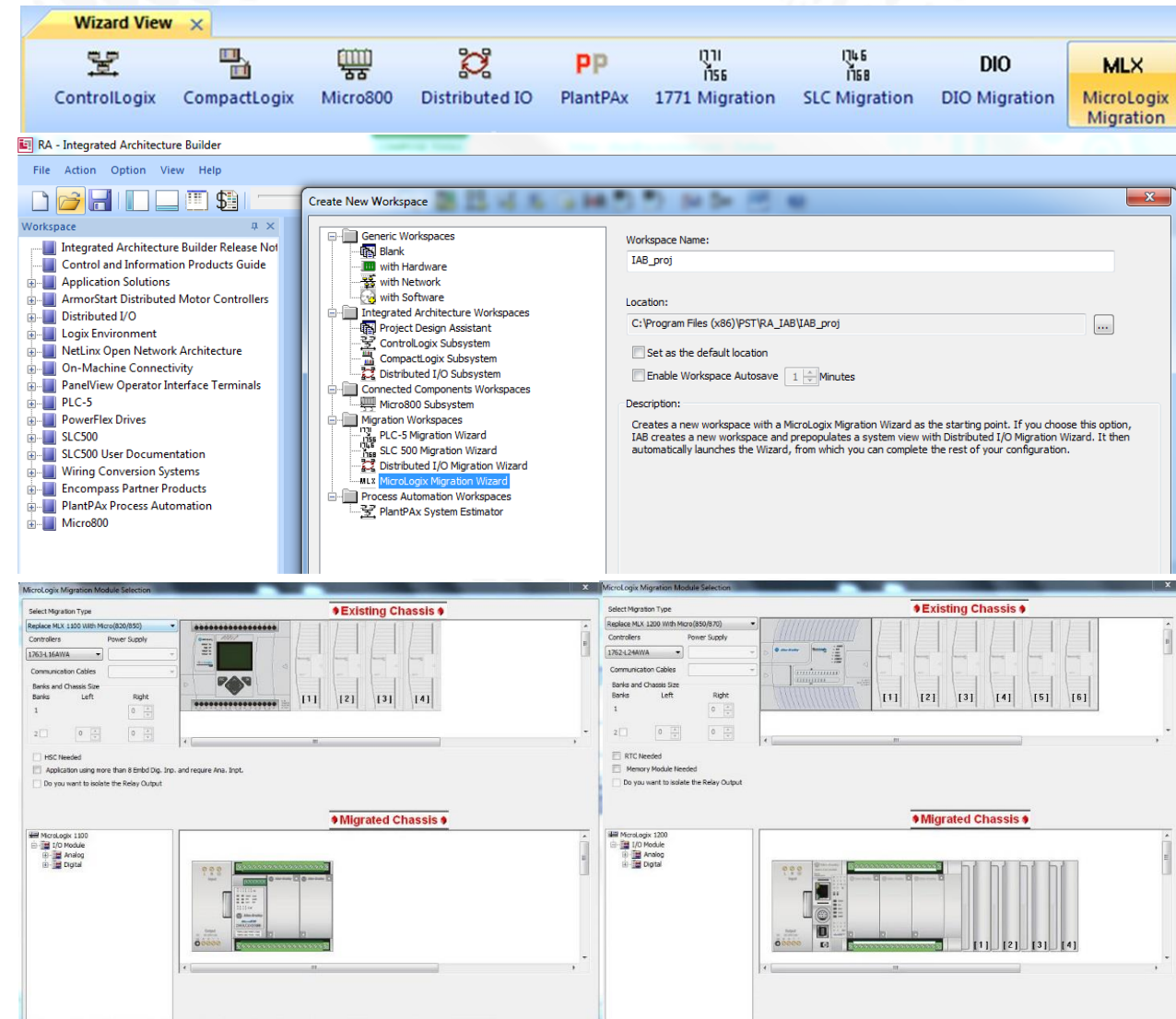
Micro870®

- MicroLogix™ 1500 controller lifecycle status
  - Product discontinued since July 2017
- Recommended migration path
  - Migrate MicroLogix™ 1500 controller to CompactLogix™ 5370 L1Y or L2Y controller if the customer prefers to retain Compact I/O™ modules (Bulletin 1769)
  - Migrate MicroLogix™ 1500 controller to Micro870® controller if the customer wants to stay with a programmable logic controller (PLC) and does not want to upgrade to a programmable automation controller (PAC)
- Migration tools
  - RSLogix™ Project Migrator\* supports conversion of MicroLogix™ 1500 project to a CompactLogix™ project
  - MicroLogix™ to Micro800™ Converter tool v5.00 supports conversion of MicroLogix™ 1500 project to a Micro800™ project
  - MicroLogix™ Migration Wizard in [IAB](#) tool

\*RSLogix™ Project Migrator is integrated into RSLogix 500® software

# MicroLogix™ Migration Wizard in IAB tool

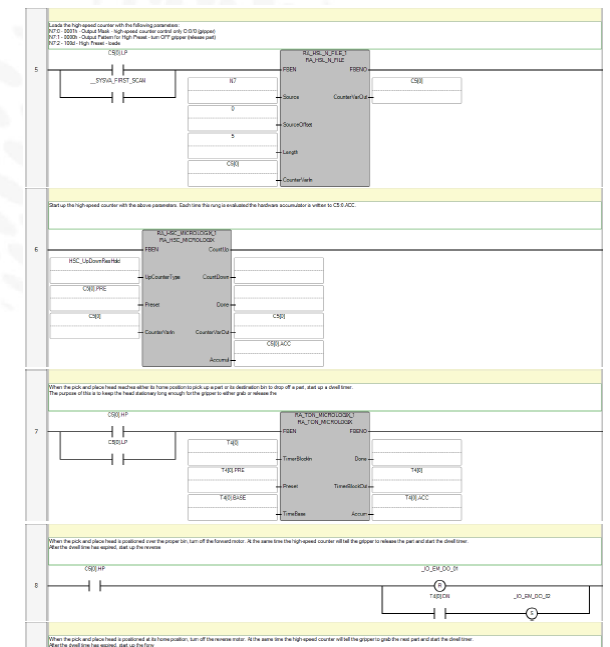
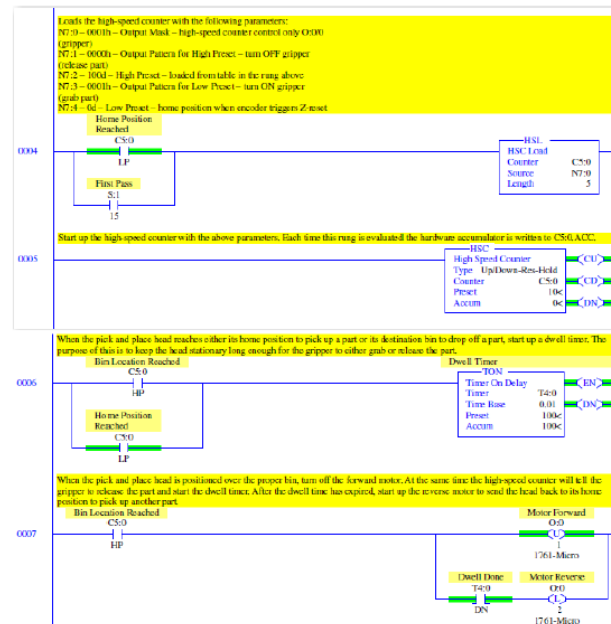
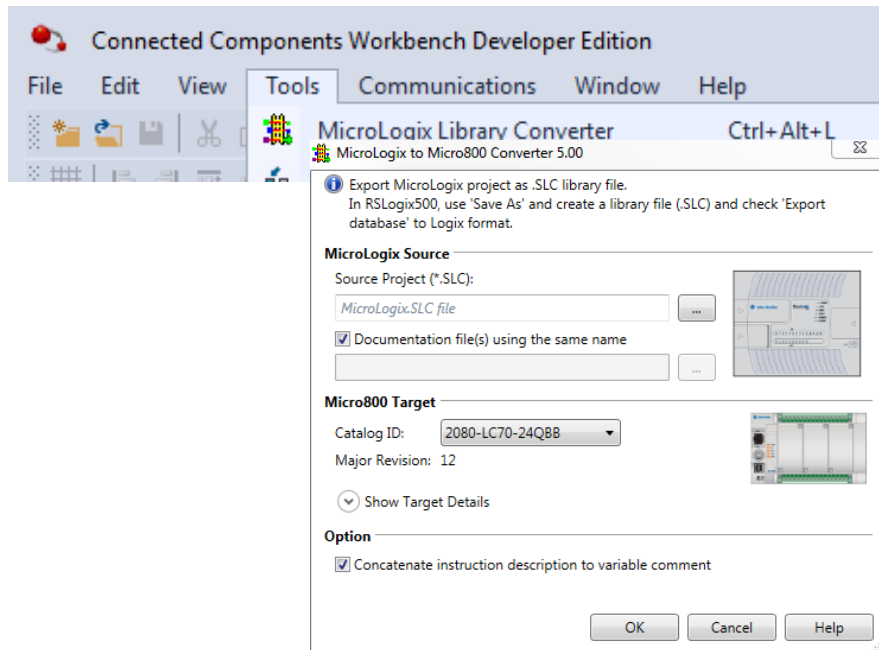
- Integrated Architecture® Builder (IAB) version 9.7.8.1 includes a Migration Wizard that is specifically created for MicroLogix™ 1000, MicroLogix™ 1100, MicroLogix™ 1200 and MicroLogix™ 1500 controller migrations
- Minimize cost and risk to convert MicroLogix™ systems to newer controller systems
- Enter current MicroLogix™ 1000, MicroLogix™ 1100, MicroLogix™ 1200 or MicroLogix™ 1500 controllers bill of material (BOM) into IAB and select a conversion option to convert the BOM to an equivalent newer controller system quickly
























# MicroLogix™ to Micro800™ Converter tool version 5.00

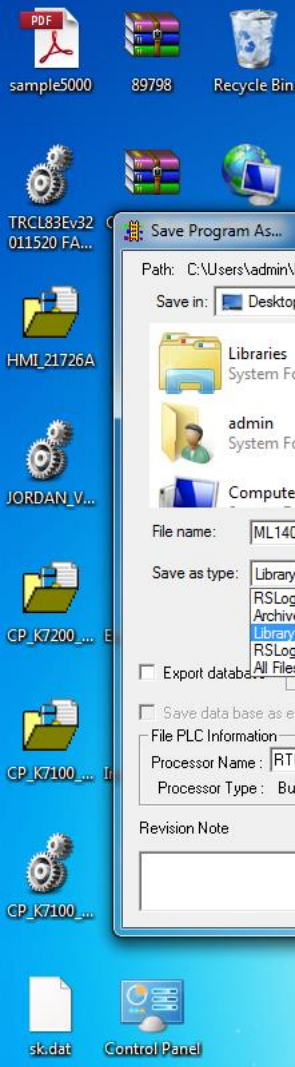
## Convert any MicroLogix™ controller

- MicroLogix™ to Micro800™ Converter tool version 5.00 is available in [Connected Components Workbench™ software](#) version 12.00
- All MicroLogix™ controllers can be converted to Micro800™ controllers including MicroLogix™ 1000/1100/1200/1400/1500
- Conversion algorithms updated to include latest enhancements and instructions
  - Subroutines now mapped to user-defined functions (UDFs) instead of user-defined function blocks (UDFBs) to save memory



# Micro PLC portfolio migration

		 <p><b>Micro800™</b></p>	<p><b>Convert aggressively</b>            Convert new customers to Micro800™ controllers.            Lead with Micro870® controller</p>
<p><b>Active</b></p>  <p><b>MicroLogix™ 1400</b></p>		 <p><b>MicroLogix™ 1400</b></p>	<p><b>Maintain current offering</b>            Continue to sell MicroLogix™ 1400 controller if customer wants to stay with MicroLogix™ 1400 controller.            Sell Micro870® controller if under competitive pressure.</p>
<p><b>Active - Mature</b></p>  <p><b>MicroLogix™ 1100</b></p>		 <p><b>Micro850®</b> <b>Micro820®</b></p>	<p><b>Modernize aggressively</b>            Migrate MicroLogix™ 1100 users to Micro850®/Micro820® controllers</p>
<p><b>End of Life</b></p>  <p><b>MicroLogix™ 1200</b></p>		 <p><b>Micro870®</b> <b>Micro850®</b></p>	<p><b>Modernize aggressively</b>            Migrate MicroLogix™ 1200 users to Micro870®/Micro850® controllers</p>
<p><b>Discontinued</b></p>  <p><b>MicroLogix™ 1500</b></p>		 <p><b>Micro870®</b></p>	<p><b>Modernize aggressively</b>            Migrate MicroLogix™ 1500 users to Micro870® controller or upsell CompactLogix™ controller</p>
<p><b>Discontinued</b></p>  <p><b>MicroLogix™ 1000</b></p>		 <p><b>Micro820®</b> <b>Micro830®</b></p>	<p><b>Modernize aggressively</b>            Migrate MicroLogix™ 1000 users to Micro820®/Micro830® controllers</p>
<p><b>Discontinued</b></p>  <p><b>Pico™</b></p>		 <p><b>Micro810®</b> <b>Micro820®</b></p>	<p><b>Modernize aggressively</b>            Migrate Pico™ users to Micro810®/Micro820® controllers</p>



RSLogix 500 Pro - ML1400-DEMO

File Edit View Search Comms Tools Window Help

OFFLINE No Forces No Edits Forces Enabled

Node: 8d

User Bit Timer/Counter Input/Output Compare

Save Program As...

Path: C:\Users\admin\Desktop

Save in: Desktop

Libraries System Folder admin System Folder Computer

File name: ML1400-DEMO

Save as type: Library Files (\*.SLC)

Export database Save data base as external files

File PLC Information Processor Name: RTU\_216 Station #: 8d Processor Type: Bul.1766 MicroLogix 1400 Series A

Revision Note Version: 3

LAD 2

PROGRAM START

THIS RUNG CREATES AN AFI BIT THAT CAN BE USED THOUGHOUT THE PROGRAM TO DISABLE LOGIC.

0000 ALWAYS AFI B3:0 0

THIS RUNG COPIES THE INPUT AND OUTPUT WORDS TO THE MODBUS CONTACT FILE FOR READING BY CHOCTAW.

0001 COPY OF N10:0 COMMANDS FOR SCADA FEEDBACK #COMM\_FEEDBACK

COPY File Source #N10:0 Dest #N11:3 Length 1

REAL TIME CLOCK YEAR RTC\_YEAR

MOV Move Source RTC:0.YR 2020< Dest N11:4 2020<

REAL TIME

000:0000 2:00 READ Disabled



Connected Components Workbench Developer Edition

File Edit View Tools Communications Window Help

MicroLogix Library Converter Ctrl+Alt+L

DeviceNet Node Commissioning Ctrl+Alt+I

SD Card Utility Ctrl+Alt+U

Module Profile Tool Ctrl+Alt+M

Micro800 Simulator Ctrl+Alt+T

ControlFLASH

External Tools...

Import and Export Settings...

Options...

Project Organizer

Name:

Devices Trends

Create new project

Getting Started

Access online resources

Welcome to Connected Components Workbench

Training Videos

New...

Open Existing...

Discover...

Recent

Project5.ccwsln

Show page on startup

Ready

9:24 AM 2/9/2021

Project Organizer

Name:

Devices Trends

Create new project from File Menu, Application Toolbar or Start Page

Start Page

Project

Design, configure, program, visualize and maintain your machine

New...  
Open Existing...  
Discover...

Recent

Project5.ccwsln

Show page on startup

MicroLogix to Micro800 Converter 5.00

Export MicroLogix project as .SLC library file.  
In RSLogix500, use 'Save As' and create a library file (.SLC) and check 'Export database' to Logix format.

**MicroLogix Source**

Source Project (\*.SLC):  
MicroLogix.SLC file

Documentation file(s) using the same name

**Micro800 Target**

Catalog ID: 2080-LC70-24QBB  
Major Revision: 12

Show Target Details

**Option**

Concatenate instruction description to variable comment

OK Cancel Help

Open

Desktop

Organize New folder

Libraries System Folder  
Network System Folder

ML1400-DEMO.SLC  
SLC File  
20.7 KB

File name: ML1400-DEMO.SLC

Project Organizer

Name: ML1400-DEMO

Devices Trends

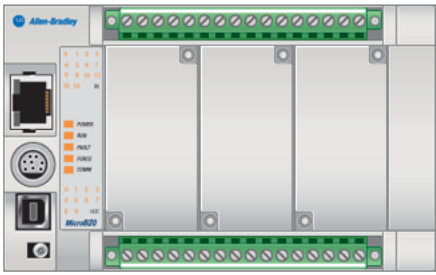
- Micro870
  - Programs
    - Prog2
      - Local Variables
      - Global Variables
    - User-Defined Function Blocks
      - RA\_SCP
        - Local Variables

Micro870

Run Remote Run Program

Connect

Download Upload Diagnose Secure



Output

Show output from: General

----- Conversion Started -----

Source:

C:\Users\admin\Desktop\ML1400-DEMO.SLC

Destination:

Catalog Identifier: 2080-LC70-24QBB

Project: ML1400-DEMO

Conversion Report Location: C:\Users\admin\Documen

Converting from Processor Type: Bul.1766 Micro

The properties summary information for the project

Warning: Arithmetic Status bits are not supported

C:\Users\admin\Desktop\ML1400-DEMO.SLC(24,37): War

C:\Users\admin\Desktop\ML1400-DEMO.SLC(24,68): War

C:\Users\admin\Desktop\ML1400-DEMO.SLC(24,100): Wz

C:\Users\admin\Desktop\ML1400-DEMO.SLC(24,132): Wz

C:\Users\admin\Desktop\ML1400-DEMO.SLC(24,163): Wz

C:\Users\admin\Desktop\ML1400-DEMO.SLC(24,195): Wz

MicroLogix Program File 'LAD 2' was converted to F

Variable 'I:0.0/0' was converted to '\_IO\_EM\_DI\_00'

Variable 'I:0.0/1' was converted to '\_IO\_EM\_DI\_01'

Variable 'I:0.0/4' was converted to '\_IO\_EM\_DI\_04'

Variable 'I:0.0/5' was converted to '\_IO\_EM\_DI\_05'

- General
- Memory
- Startup/Faults
- Serial Port
- USB Port
- Ethernet
- Interrupts
- Modbus Mapping
- Real Time Clock
- Embedded I/O
- Data Log
- Recipe
- Motion
  - < New Axis >

Controller - General

Name: Micro870

Description:

Vendor Name: Allen-Bradley

Catalog ID: 2080-LC70-24QBB

Controller Project Version: 12

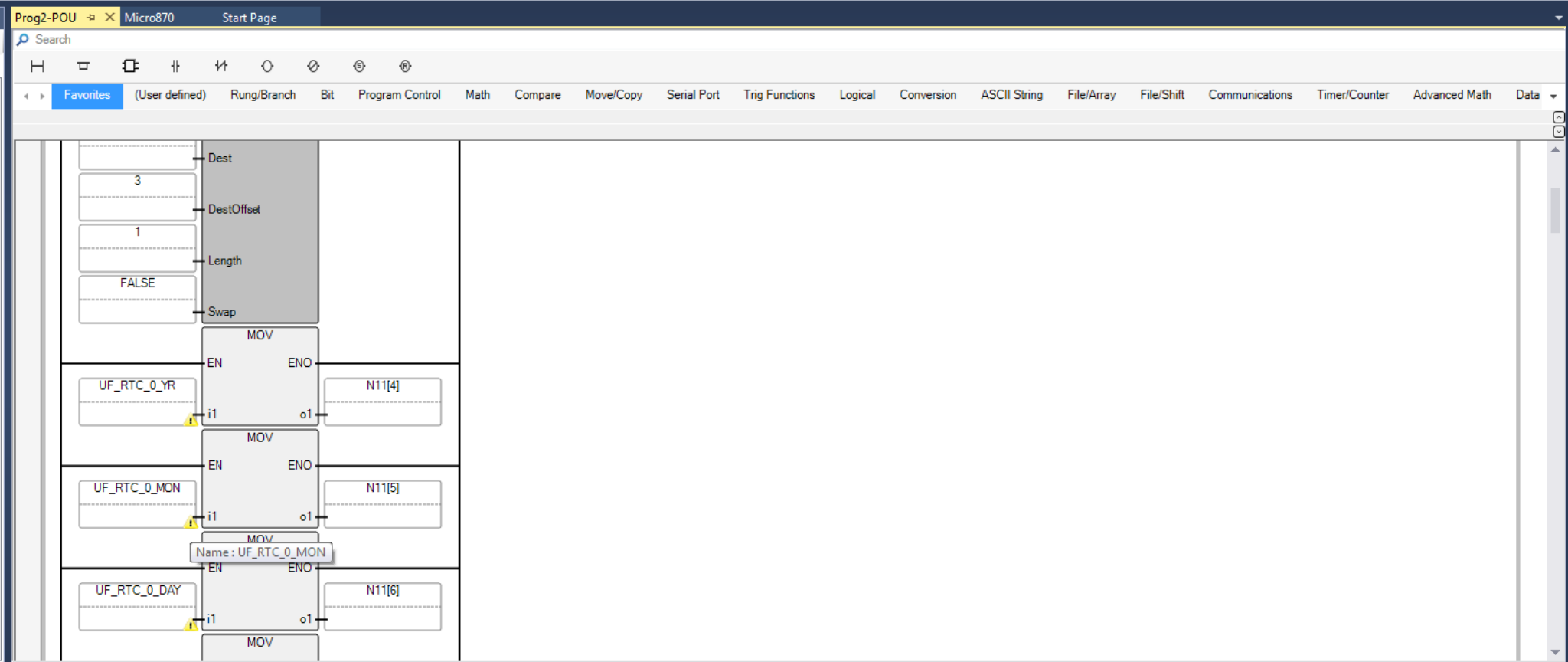
Download Source:  Yes  No

Project Organizer

Name: ML1400-DEMO

Devices Trends

- Micro870
  - Programs
    - Prog2
      - Local Variables
      - Global Variables
    - User-Defined Function Blocks
      - RA\_SCP
        - Local Variables
      - User-Defined Functions
      - DataTypes

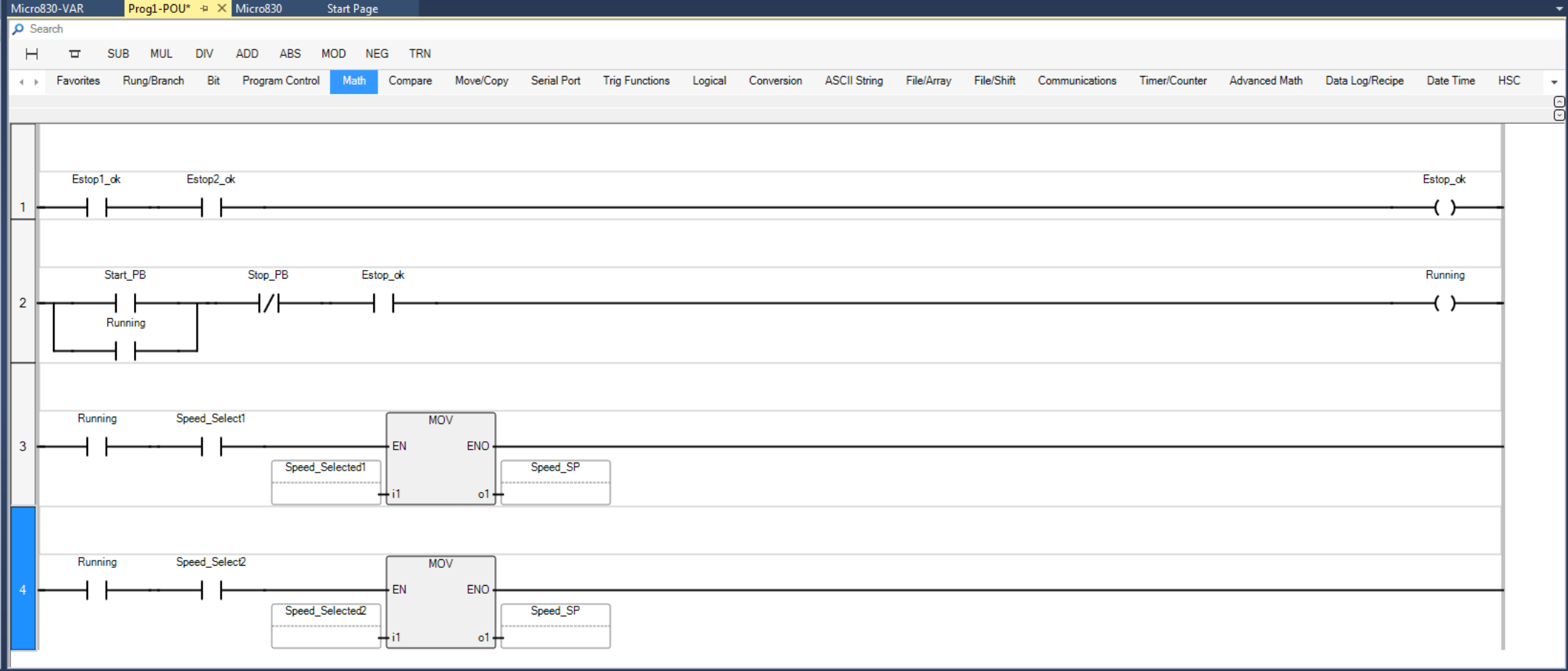


Project Organizer

Name: Project3\*

Devices Trends

- Micro830\*
- Programs
  - Prog1
    - Local Variables
    - Global Variables
    - User-Defined Function Blocks
    - User-Defined Functions
    - DataTypes

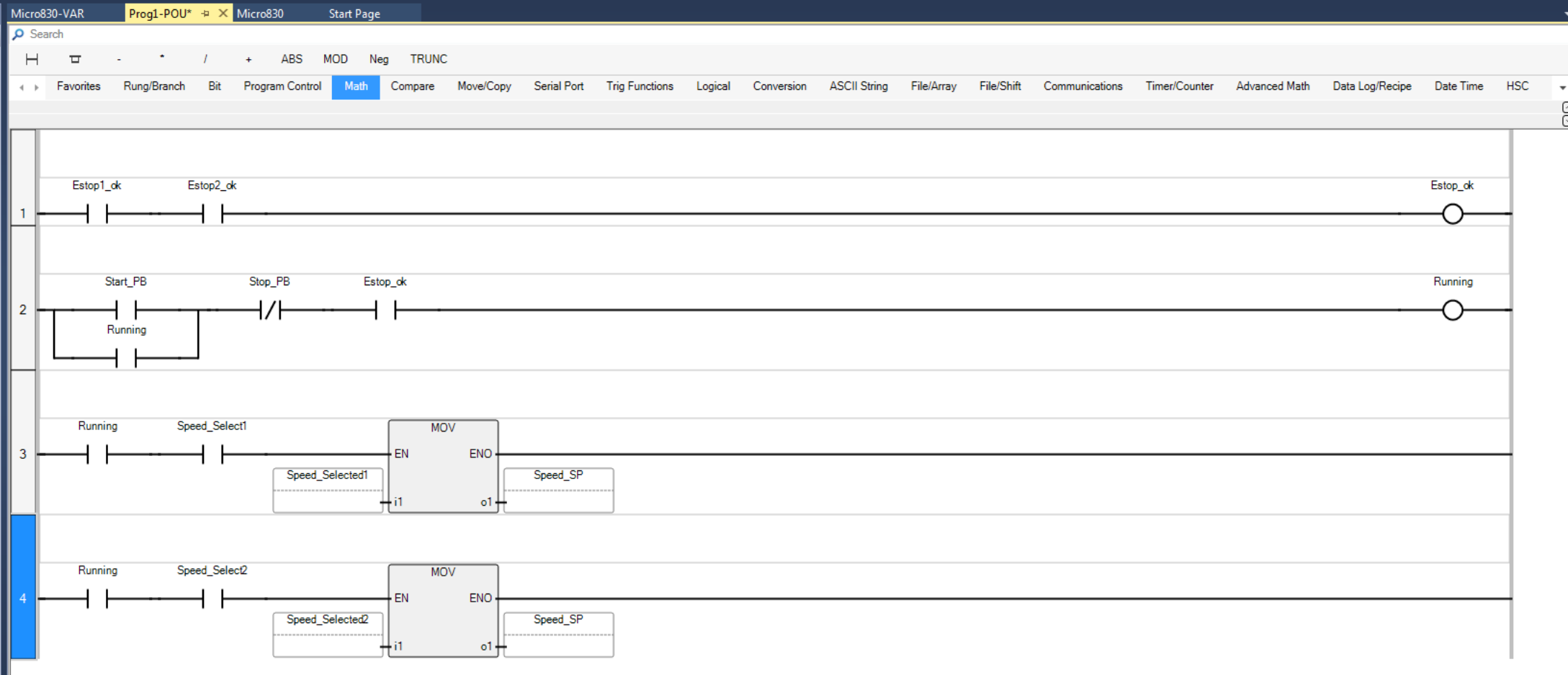


Project Organizer

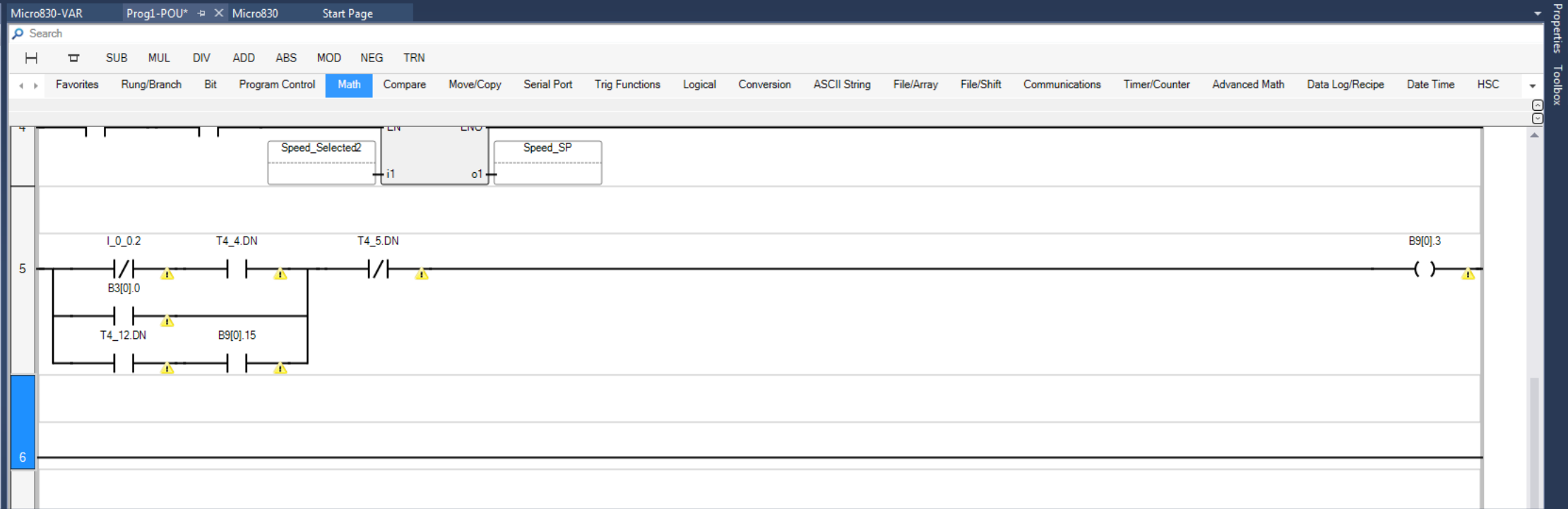
Name: Project3\*

Devices Trends

- Micro830\*
- Programs
  - Prog1
    - Local Variables
    - Global Variables
    - User-Defined Function Blocks
    - User-Defined Functions
    - DataTypes



Project Organizer  
Name: Project3\*  
Devices Trends  
Micro830\*  
Programs  
Prog1  
Local Variables  
Global Variables  
User-Defined Function Blocks  
User-Defined Functions  
DataTypes



Output  
Show output from: General  
The name of variable 'I:0.0/2' has been changed to 'I\_0.0.2'  
The name of variable 'T4:4/DN' has been changed to 'T4\_4.DN'  
The name of variable 'B3:0/0' has been changed to 'B3[0].0'  
The name of variable 'T4:12/DN' has been changed to 'T4\_12.DN'  
The name of variable 'B9:0/15' has been changed to 'B9[0].15'  
The name of variable 'T4:5/DN' has been changed to 'T4\_5.DN'  
The name of variable 'B9:0/3' has been changed to 'B9[0].3'

# Reference Materials and Labs Available

[MicroLogix Controllers to Micro800  
Controllers Migration Guide](#)

[Experience MicroLogix migration tools for  
modernizing to Micro800 controllers lab  
manual.pdf](#)

IAB Micrologix Migration Wizard