# **Migration solutions**

SLC<sup>™</sup> 500 to CompactLogix<sup>™</sup> 5380 control system

## **Optimize productivity and minimize risk with modern technology**

To stay ahead of the changing market demands, it is crucial to have migration solutions that can help lower the risk of maintaining legacy equipment and achieve increased productivity. Maximize your competitive advantage by collaborating with a partner who has the product, service and industry knowledge to develop your upgrade strategy.

Rockwell Automation and our partners will develop a modernization strategy with you to fit your application needs and long-term goals. You can migrate all at once or in phases, at the pace that is comfortable for you and to fit your budget. This will allow you to migrate with ease from SLC<sup>™</sup> 500 to CompactLogix<sup>™</sup> 5380 control system.

### **Product lifecycle**

Use the **Product Lifecycle Status** search tool on the web to find specific lifecycle information by catalog number.

### ACTIVE

**ACTIVE MATURE** 



ACTIVE: Most current offering within a product category.

ACTIVE MATURE: Product is fully supported, but a new 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:** 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.







CompactLogix<sup>™</sup> 5380 controller and Compact 5000<sup>™</sup> I/O system





# Why upgrade or migrate?

Modern technology helps you stay ahead with better performance and greater efficiency in a global market

The SLC<sup>™</sup> 500 control system migration is part of the proactive modernization plan we have for you. Modernizing your legacy automation system helps you achieve better system performance, capacity, productivity, and security to meet the growing demands of smart machines and equipment for manufacturing.

Plan now to lower the risk of maintaining legacy equipment and achieve increased productivity with SLC 500 to CompactLogix<sup>™</sup> 5380 control system migration. It is an opportunity to meet more application requirements with standard and safety options from CompactLogix 5380 and Compact GuardLogix® 5380 controllers respectively.

## **Advantages**

### Get more with CompactLogix 5380 control system

- Gain additional flexibility with integrated motion on EtherNet/IP<sup>™</sup> up to 32 axes
- Improve performance with high-speed I/O, motion control and Device Level Ring (DLR) and Linear topologies with dual gigabit (Gb) embedded Ethernet ports
- Increase security with controller-based change detection, logging and encrypted firmware
- Maximize returns on existing assets through improved control and access to real-time diagnostics
- Reduce commissioning time and optimize productivity with one common development environment, Studio 5000 Logix Designer® application



# Develop a modernization plan

Evaluate your options for a proactive lifecycle plan:

### Modernization services from Rockwell Automation

Reduce lifecycle risks before, during and after the migration process with modernization solutions that are tailored to your specific needs. Our modernization services and support help to minimize downtime, maximize operational success and lessen the risk of maintaining legacy equipment. From project management to startup, we will help define and implement an effective modernization strategy for your facility.

### **Recognized system integrator or solution provider**

Our PartnerNetwork<sup>™</sup> program provides an integrated team of engineering specialists and suppliers that are leaders in the automation and manufacturing industry who have experience delivering products or services that are designed to work with Rockwell Automation<sup>®</sup> solutions.

#### Do It Yourself

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If you prefer to migrate from SLC<sup>™</sup> 500 to CompactLogix<sup>™</sup> 5380 control system without assistance, Rockwell Automation provides many tools and resources to help you plan and migrate with as little disruption as possible.





# Tools to plan and execute your migration

Rockwell Automation provides migration tools for hardware selection and conversion, and code conversion, that eliminate the need to modify any field device wiring. All tools are available regardless of who performs the migration: Rockwell Automation, System Integrator, or Do It Yourself.

### **Installed Base Evaluation**

An Installed Base Evaluation<sup>™</sup> (IBE<sup>®</sup>) service provides a thorough analysis of your critical plant assets and their condition. This site-delivered service provides detailed reports by site, area, line, machine and panel.



### **Integrated Architecture Builder**

The Integrated Architecture® Builder (IAB) tool is a graphical, user-friendly software tool that allows you to define and configure CompactLogix<sup>™</sup> 5380 control system architecture automatically, including a detailed bill of materials (BOM) based on your current SLC<sup>™</sup> control system.

## Popular configuration drawings for CompactLogix 5380 controllers

Use these system configuration drawings to build a scalable Integrated Architecture<sup>®</sup> system for your industrial application and understand the basic performance, capacity and configurations that the controllers can use.

## ProposalWorks proposal builder

This tool helps you create bill of materials, RFQs and proposals for your automation projects directly from your computer. The tool has more than 1,500 wizards and an easy-to-use search capability to find the right products to meet your application requirements.

## RSLogix 5000 or Studio 5000 project migrator

The Project Migrator tool allows you to save time and engineering resources when converting your SLC<sup>™</sup> 500 application code. After exporting your RSLogix 500<sup>®</sup> project file, you can use the embedded conversion utilities to import your code into RSLogix 5000® or Studio 5000 Logix Designer<sup>®</sup> application.



## SLC EtherNet/IP communication module

The SLC EtherNet/IP<sup>™</sup> communication module (1747-AENTR) enables communication and data transfer between a CompactLogix 5380 controller and remote I/O via Ethernet communications. Using the 1747-AENTR module in a phased modernization allows the existing remote I/O network to remain in place. This also allows the new application to be tested before switchover and to switch back to the old application easily.

## Compact 5000 I/O serial module

The Compact 5000<sup>™</sup> I/O serial module (5069-SERIAL) enables the communication between a controller and I/O on a serial network. It can function as a local I/O or remote I/O module over an EtherNet/IP network.

### 1492 I/O wiring and conversion system

The 1492 I/O conversion system provides a fast and efficient method for converting SLC I/O to Compact 5000 I/O. The I/O conversion is accomplished without removing any field wires from the existing control cabinet, eliminating the risk of wiring errors.



# Getting started: Analyzing your automation system

With industry knowledge and worldwide services support, Rockwell Automation will partner with you to ensure a smooth transition from your SLC<sup>™</sup> 500 to CompactLogix<sup>™</sup> 5380 control system.

## **STEP 1:** Document existing system layout and define future system requirements

Begin your migration planning by documenting your existing system as a reference point. This will enable you to consider the available options and find a solution that best meets your existing and future requirements.



## **STEP 2:** Plan migration

Once you have your overall migration approach, use Integrated Architecture<sup>®</sup> Builder (IAB) tool to help plan the details. The SLC migration wizard embedded in IAB will guide you through the system configuration process. You can decide which are the components to reuse or replace. If you choose to reuse the SLC I/O, IAB will verify module support and power supply loading and help you lay out the new EtherNet/IP network. The 1492 I/O conversion system in IAB helps to minimize the risk of wiring errors by preserving existing field wiring connection during I/O conversion.



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# Moving forward: Executing your project

Whether you choose to migrate all at once or in phases, we have the tools and experience to guide you through the transition. Our approach to modular automation coupled with backward compatibility allows you to maintain productivity as you upgrade portions of your automation system.

### **PHASE 1:** Application code conversion

Save time and engineering resources when converting your SLC<sup>™</sup> 500 application code by using the embedded conversion utilities in RSLogix 5000<sup>®</sup> or Studio 5000 Logix Designer<sup>®</sup> application. Converting your PanelView<sup>™</sup> Standard application to a PanelView Plus 7 application is as simple as importing the existing project into FactoryTalk<sup>®</sup> View Machine Edition software.

Tools: RSLogix 5000/Studio 5000 Logix Designer application, FactoryTalk® View Studio software

#### Advantages of application code:

- Converts code using automated code conversion
- Leverages powerful constructs and features to improve the application

#### **Advantages of Human Machine Interface** (HMI) application:

- No further modification will be required, most of the time
- Utility generates conversion log, which identifies features that are not supported by the selected new hardware
- Enhanced features and graphics
- Better integration with controllers



## **PHASE 2:** Replace the SLC controller and/or module

Mount and wire the CompactLogix<sup>™</sup> 5380 system and replace the SLC first slot module (SLC processor or communication module) with the SLC EtherNet/IP<sup>™</sup> communication module (1747-AENTR). Using this module helps you retain your existing SLC I/O and preserve existing field wiring, while allowing your SLC I/O chassis to be controlled from your new CompactLogix controller. This approach simplifies the migration process, reduces risks associated with rewiring the I/O and saves valuable time, which allows you to get your application into production quickly.

Tools: SLC EtherNet/IP communication module user manual (1747-UM076), CompactLogix 5380 and Compact GuardLogix 538 controllers user manual (5069-UM001)

#### **Advantages:**

- Maintain existing field wiring
- Ability to revert to SLC I/O, if needed



# Moving forward: Executing your project

### **PHASE 3:** Replace other system hardware and review investment

If your control system has legacy or competitive variable speed drives, motion control, sensors, or motor control centers, Rockwell Automation can help migrate those products as well. We have a worldwide service group that can do the migration work, assist and train operators or provide the maintenance services once the migration is complete. We can also review your network needs and asset management for your entire facility.

Tools: Popular configuration drawings for CompactLogix 5380 controllers

## **PHASE 4:** I/O replacement

In the final phase of the migration process, the 1492 I/O conversion system is used to replace SLC<sup>™</sup> 500 with CompactLogix<sup>™</sup> 5380 control system. Because I/O replacement represents a large investment, we provide an approach that is right for your schedule and budget. The 1492 I/O conversion system allows I/O conversion from SLC<sup>™</sup> I/O to the Compact 5000<sup>™</sup> I/O without removing existing field wiring connections. This helps to reduce conversion time, labor costs and reduce potential downtime risk that could result from wiring mistakes during the migration. Planning your migration is more manageable as the I/O can be swapped one rack at a time or all at once. In either case, you can run both new and old I/O architectures simultaneously. Additionally, I/O cross-reference documentation assures correctness and provides historical backup for future troubleshooting or diagnostics.

Tools: <u>1492 I/O wiring and conversion system</u>, <u>ProposalWorks™ proposal builder</u>





# Modernization and conversion services

In any phase of your conversion project, Rockwell Automation can provide you with technical, industry and project management expertise to help make a migration project easier. We will help you design a plan to account for your short- and long-term goals. You will be assigned a primary engineer as your primary communications contact, who will be responsible for coordinating and scheduling implementation activities and resources.

Using standardized checklists and processes, our primary engineer will review to confirm the project scope, validate risks, review testing and acceptance criteria, and gather the required information and software to convert existing screens and application code.

#### **Deliverables include:**

- Bill of materials
- Conversion acceptance criteria
- Project schedule and timeline
- Required information sent to conversion engineer team

To request a migration quote, please contact your local authorized Allen-Bradley distributor or Rockwell Automation sales office.

#### If you need additional help, Rockwell Automation can provide:

- Application level phone support during the startup and debugging phase of the project
- Consultation on system re-engineering, operator interface, architecture and communication strategies, training, and on-site startup

#### Application modernization services

Using custom-developed proprietary software applications designed to convert legacy control, visualization and variable-frequency drive platforms, our engineers will complete and test the conversion process to confirm operability of the new control system and hardware.

### **Deliverables include:**

- Correct and convert any instruction and/or addressing errors to the new processor family
- Multilingual database conversion offered

### Startup and acceptance

Before installation, comprehensive functional testing will be performed, which includes preloading of all applicable software and firmware. Once installation is complete, our engineer, working closely with your plant staff, will conduct an operational compliance review. Comprehensive system documentation will be provided upon project acceptance.

#### **Deliverables include:**

- · Operational test performed and validated by customer
- Necessary documentation, including product sheets and software files
- Customer acceptance
- Optional: Red-lined or updated drawings

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