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# Novinky Integrated Architecture

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PUBLIC

# Agenda

**Rockwell  
Automation**

**Integrated Architecture Value**

**New Product Update**

**On-Machine Portfolio**

**Studio 5000®**

**Lifecycle Update**



# Integrated Architecture Portfolio

**Rockwell  
Automation**

Allen-Bradley • Rockwell Software



## Integrated Architecture

### Smarter Technology

Multiple control  
disciplines

Scalable hardware

### Enhanced Productivity

Design  
productivity

Operations  
Management

### Secure Environment

Automation  
security

Investment return

## Control



**LOGIX**

## Software



**STUDIO 5000**

## Motion



**KINETIX**

## Operator Interface



**PANELVIEW**

## Network Infrastructure



**STRATIX**

## Distributed I/O Condition Monitoring



**POINT – FLEX – ARMOR - DYNAMIX**

# Visualization



# MobileView™ Tethered Operator Interface

Available today

**Rockwell  
Automation**



## Applications requiring:

- Line of sight requirements
- Setup/calibration activities
- Local safety functionality
- One or multiple mobile HMI stations



# PanelView Plus 7 Standard and Performance Operator Interface

**Rockwell  
Automation**

**More Screen Options...**  
**Greater Resolutions...**  
**Additional Certifications...**

- **New Displays:**
  - Increased screen resolution
  - Wide screen options
  - Additional sizes – from 4” to 19”
- **Certifications:**
  - ATEX
  - INMetro, EAC – Release 2
  - Marine (Future Performance models)
  - IP66, IP54, NEMA 12, NEMA 13 and NEMA 4X



**Standard version - currently available**  
**Performance version - coming soon**

# PanelView™ 5000 Operator Interface

- HMI platform for extended Logix integrated solutions using **Studio 5000 View Designer™** software
  - **Intuitive, modern design:**
    - Display options: 7", 9"W, 10", 12"W, 15", 19"
    - Widescreen, Touch and Keypad options
  - **Increased productivity from design-time to run-time**
    - Pre-configured system banner
    - Navigation button
  - **Enhanced Integration with Logix**



# Kinetix Motion Update

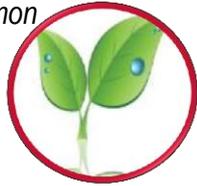


# Kinetix® 5700 Servo Drives

## System Features

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Automation**

200A Common  
DC Bus



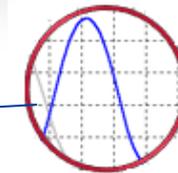
DC Bus Supplies,  
Single and Dual  
Axis Servos



Networked or  
Hardwired Safety -  
Safe Safe Torque-  
off SIL3/PLe

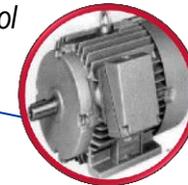


Multi-Feedback Port  
VPL Feedback Port



Advanced Tuning  
Technologies

Servo, Open and  
Closed Loop Vector  
Motor Control



40-70% Footprint  
Reduction



## VPF Food Grade Motor

- Designed to meet the unique needs of many food and beverage applications
- Six frame sizes from 63 mm to 165 mm
  - Continuous torque range of .93-19.4 Nm
- Durable food grade white paint with premium adhesion



## VPL Servo Motor

- Windings optimized to match drive ratings allowing for efficient system sizing
- Digital feedback device provides real-time motor performance information to the control system
- Single cable provides feedback, motor brake and motor power simplifying wiring and reducing inventory



## Integrated Architecture Provides

- Synchronizes with Kinetix
- One design environment Studio 5000<sup>®</sup>

## Mechanical Standardization Provides

- Greater design flexibility
- Higher value machine

## Increase Production

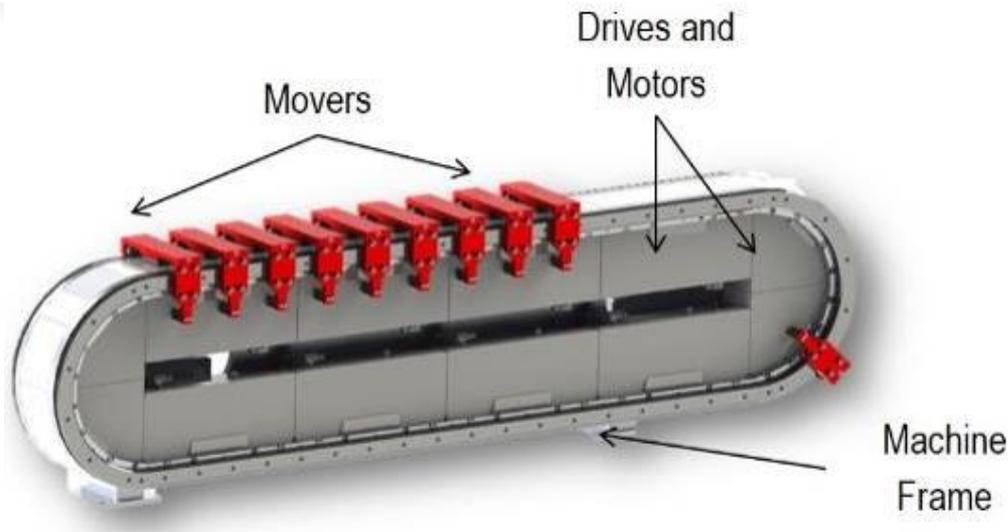
- High speeds up to 5 ms
- High acceleration up to 10g
- Quick product changeover

## Lower Maintenance Time

- No moving cables
- Built in lubrication system
- No belts or chains to tension

## Reduce Space

- High-power density
- Reduced mechanics
- Integral part of machine frame



# Networks Infrastructure Update



# Stratix 5400 Industrial Switch

## Enhanced Switching and Routing

- **All gig port options** for high performance resilient requirements
- **Layer 3 routing capability** for segmented network and plant to enterprise integration

## Simplified Setup & Maintenance

- Default automation configurations
- Optimized “Smartport “ configurations
- DHCP per port device IP addressing
- SD card for easy device replacement



## Advanced Networking Features

- Power over Ethernet (PoE) for simplified end device wiring
- Network Address Translation (NAT) reduces commissioning time
- Enhanced security options

## Optimized Integration

- Embedded Cisco technology provides integration with enterprise network
- Predefined Logix 5000® tags
- Studio 5000® Add-on Profiles (AOPs) for configuration and monitoring

# 1783-NATR Device

## Ease of set-up and deployment

- Delivers standard machines without unique IP addresses
- Mapping of machine-subnet addresses to end users' addresses
- Dual port Ethernet for Linear or Device Level Ring (DLR) topologies

## Simplified Device Configuration

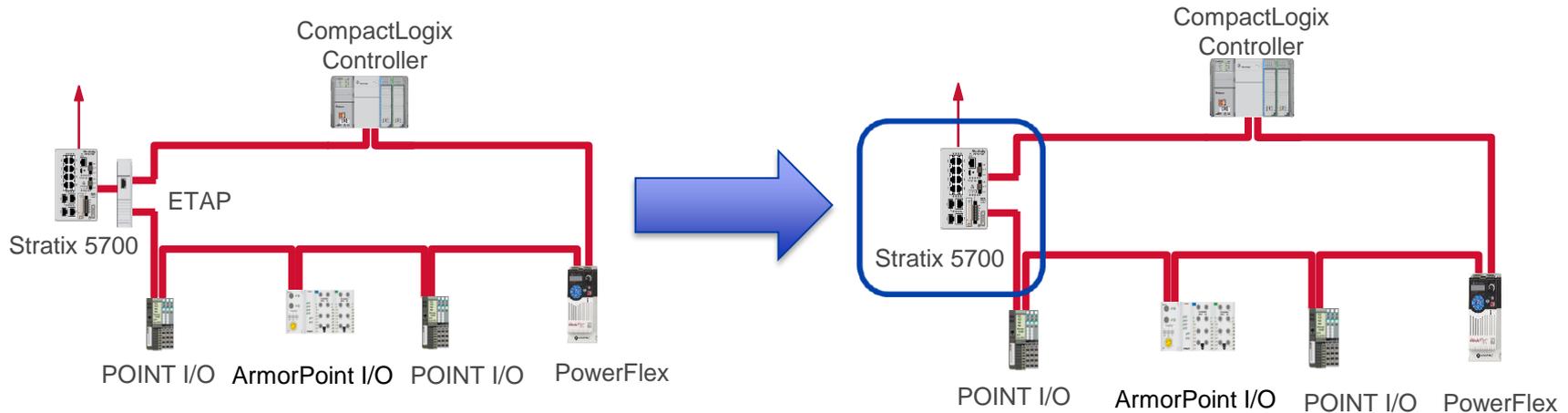
- SD card for configuration backup
- Web page and/or Add-on Profile (AOP)
- **High performance capabilities**
  - Up to 32 network address mappings
  - 10/100MB rates for Ethernet ports



Compliance with IEEE 802.3  
and ODVA EtherNet standards

# Stratix 5700 with DLR

- Direct DLR connection to Stratix 5700
  - Firmware upgrade (152-3.EA1.fc2) on selective hardware versions
- Eliminates the need for an ETAP
- Can be configured as a node or supervisor
- Provides consolidated (in the switch) network status and diagnostics



# Ethernet to DeviceNet Linking Device

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## Certifications

- IP67-rated version of 1788-EN2DNR

## Networking

- DeviceNet standard and safety
- Dual Ethernet port for Device Level Ring and Linear topologies

## Standardized M12 Connector

- Provides field connections for quick installation

## IP Address Setting

- Rotary switches



**EtherNet/IP™**

# CompactLogix® Controller Update



# 1769-L19ER-BB1B

**Rockwell  
Automation**

## 1769-L19ER-BB1B

- All the capability of 1769-L18ER-BB1B
- With **1MB** user memory
- Embedded I/O: 16DI +16DO

**Perfect fit for applications that require low I/O count but more user memory requirements, such as process skid control**



Oil & Gas



Food & Beverage



Automotive



Life Sciences

# 5370 Compact GuardLogix® Controllers

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Automation



## 3 Catalog numbers

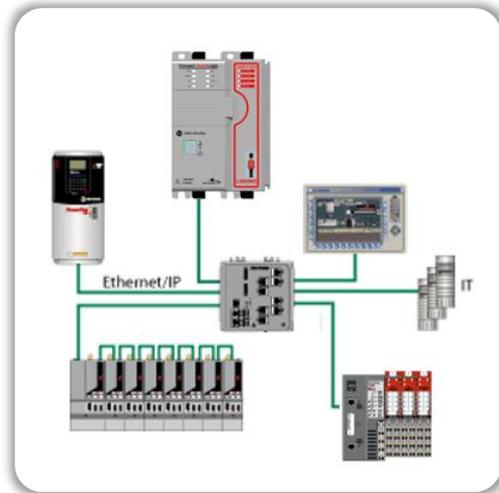
- **1769-L30ERMS** (1.0 M standard +0.5 M Safety memory, 4 Axis of Integrated Motion on the EtherNet/IP network)
- **1769-L33ERMS** (2.0 M standard +1.0 M Safety memory, 8 Axis of Integrated Motion on the EtherNet/IP network)
- **1769-L36ERMS** (3.0 M standard +1.5 M Safety memory, 16 Axis of Integrated Motion on the EtherNet/IP network)

## Compact GuardLogix®

- High performance-integrated safety
- Standard, Safety and Motion control
- CIP safety on the EtherNet/IP network
- Superior ease-of-use for SIL2, SIL3, PLe safety functions
- High Integrity Add-On Instruction



1002 Architecture  
SIL3 (IEC61508)  
PLe (ISO13849)



# ControlLogix® Update



# Armor™ GuardLogix®

## Armor™ ControlLogix 5570

**Rockwell  
Automation**

### Armor ControlLogix and Armor GuardLogix

- Standard and safety On-Machine control up to SIL 3, PLe in an IP67-rated housing for dust and wash-down protection in harsher environments



### Status indicators

- Four indicators provide immediate status about the controller's health



### Networks

- Two independent Ethernet network connectors provide network flexibility
- Dual ports allow Device Level Ring topology

### Secure Digital (SD) card

- Nonvolatile memory permanently stores user programs and tag data

### Power Supply

- Enables power for each device

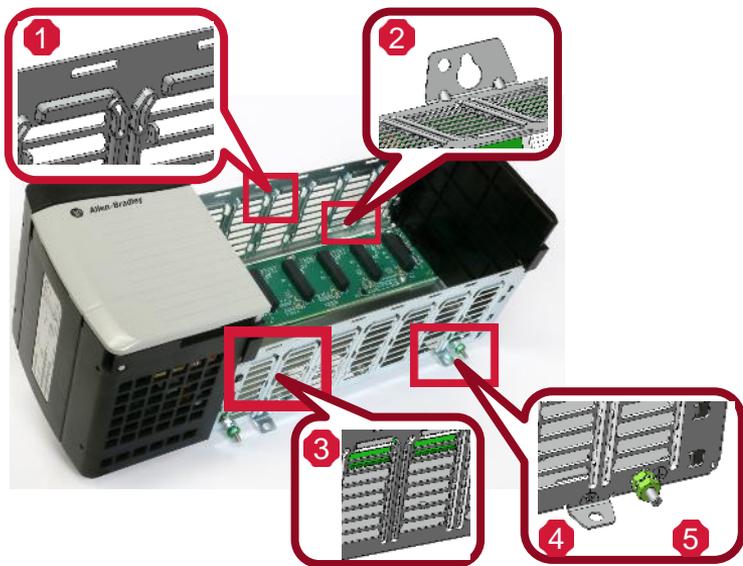
### USB Port

- High performance and speed for easier programming



# ControlLogix Chassis Series Update

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1. Improved card guide for easier module slot location and insertion.
2. Additional mounting hole for high shock/vibration environments.
3. Improved ventilation for future high performance modules.
4. Improved, stiffer mounting tab.
5. Additional ground screw added as required for some applications.

**Series C Chassis now available**

# Redundancy Firmware Releases

- Firmware revision V20.055\_kit5
  - Adds 1756-EN2F Series C Support
- Firmware revisions V16.081\_kit5 and V19.053\_kit3
  - Adds support for updated CNET/ENET communication module FW
- Firmware revision V20.056
  - Addresses select anomalies
  
- Firmware revision V24.5 (**NEW MAJOR REVISION!**)
  - Adds ability to utilize V24 feature set in a redundant system



Released



Early  
2016



## EtherNet/IP

- Supports multi-cast and unicast for user flexibility
- Dual Ethernet port for Device Level Ring and Linear topologies

## Status Indicators

- Network, Link, I/O and Power indicators provide immediate status about module health

## Certifications

- IP67-rated package for use on machine
- CE, C-Tick, KCC markings
- TUV certified up to Category 4, SIL 3, PLe

## Standardized M12 Connector

- Provides field connections for quick installation

## IP Address Setting

- Rotary switches
- Supports DHCP



**EtherNet/IP™**

# Condition Monitoring Update



# Dynamix™ 1444 Series Integrated Condition Monitoring

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## Machine Protection & Condition Monitoring

- Vibration
  - Acceleration
  - Velocity
  - Displacement
  - Absolute Shaft Vibration
  - Spike Energy (gSE)
- Speed
- Pressure
- Thrust
- Case Expansion
- Differential Expansion
- Rod Drop



**EtherNet/IP™**

**Dual Ethernet port for linear  
and Device Level Ring**



# Studio 5000 Logix Integration

The screenshot displays the Studio 5000 Logix Integration software interface. On the left is the **Controller Organizer** tree, showing a hierarchy of folders including **Controller Feed\_Pumps**, **Controller Tags**, **Controller Fault Handler**, **Power-Up Handler**, **Tasks**, **MainTask**, **MainProgram**, **Unscheduled Program**, **Motion Groups**, **Ungrouped Axes**, **Add-On Instructions**, **Data Types**, **User-Defined**, **Strings**, **Add-On-Defined**, **Predefined**, **Module-Defined**, **Trends**, **Logical Model**, **I/O Configuration**, **PointI/O**, **Embedded I/O**, **Expansion I/O**, and **Ethernet**. The main workspace shows a motor control interface with several components:

- Unbalance** (Green button)
- Alignment** (Green button)
- Bearings** (Yellow button)
- Cavitation** (Green button)
- Overall** (Green button)
- Monitor Fault** (Grey button)
- Sensor Fault** (Grey button)
- Motor Speed** display showing "NNNNN rpm"
- Legend:**
  - Red square: Motor Fault
  - Green square: Motor Running
  - Black square: Motor Stopped
- A 3D motor assembly diagram at the bottom.

On the right side, a **Controller Tags - Feed\_Pumps(controller)** table is visible. The scope is set to **Test\_Bands** and it shows **All Tags**. The table has columns for **Name**, **Value**, **Force**, **Style**, **Data T**, and **Description**. A blue box highlights the **Description** column, which lists various fault and status tags.

Name	Value	Force	Style	Data T	Description
AB:E...					
AB:E...					
AB:E...					
AB:14...					
AB:10...					
AB:14...					
AB:14...					
AB:14...					
REAL					Overall
REAL					Unbalance
REAL					Rub
REAL					Misalignment
REAL					Looseness
REAL					Rotor Bar
REAL					Laminations
REAL					Bearing Wear (1)
REAL					Bearing Wear (2)
REAL					Bearing Wear (3)
REAL					Bearing Wear (4)
REAL					Flow
REAL					Cavitation
REAL					RPM
AB:14...		{...}	{...}		
AB:14...		{...}	{...}		

# On-Machine Update



# Comprehensive On-Machine™ Solution

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Expanded portfolio now includes:

- Programmable Controllers
- Ethernet Switches
- Connection Systems and Network Media
- Distributed I/O
- Sensors, Switches, Push Buttons and Signaling
- Power Supplies
- Distributed Motor Control
- Basic Motion
- Safety
- Operator Interface



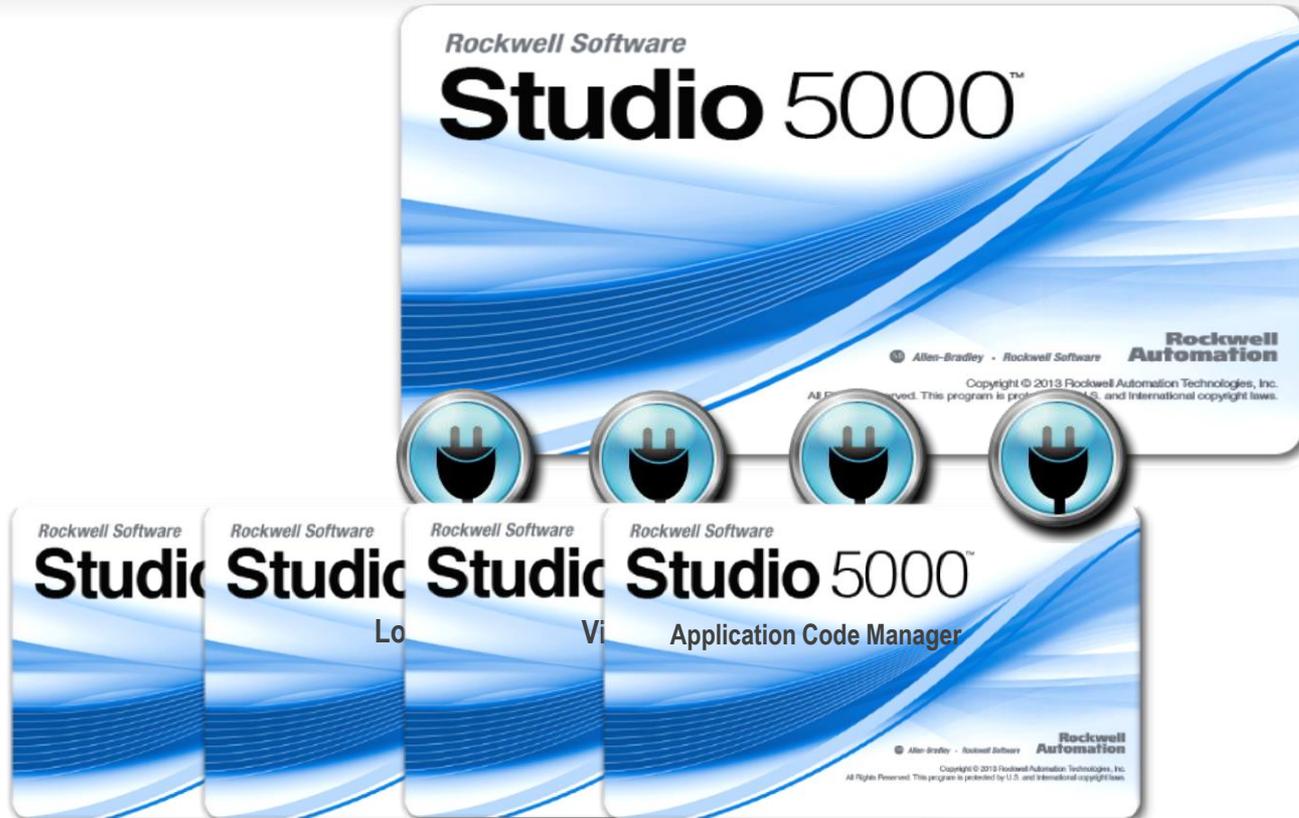
*New on-machine products  
available today*

# Studio 5000<sup>®</sup> Update



# Studio 5000® Software This Year

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# Studio 5000 Software

## Product

## What are we doing

## Why are we doing it

- **Studio 5000 V24 (Oct '14)**
  - Automation Productivity Release



- Logical Organizer
- Library Management
- Modular Code Features
- Compare & Merge

- Design efficiency
- Automation productivity

- **Studio 5000 V26 (April '15)**



- K5700 Support
- Content protection

- Support new motion products
- System security

- **Studio 5000 V20.04 SW (Q3CY15)**
- **Firmware re-roll**  
– (Q3/Q4 CY15)



- Resolves minor revision workflow break

- To restore expected behavior

# Studio 5000 Software

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## Product

## What are we doing

## Why are we doing it

- **Studio 5000 V27 (Q3CY15)**



- System Architect
- View Designer (supporting PV5000)
- Application Code Manager
- Compare and Merge enhancements

- Studio 5000® Integrated Design Environment
- Support PV5000 launch
- New library management tools
- Expanded collaboration tools

- **Studio 5000 V28 (Q4CY15)**



- New Hardware Support
- Security Features
- Sequence Manager
- PlantPax® Object Configuration

- New hardware support
- System security
- Better support for Process applications

- **Studio 5000 V24.5 (Q4CY15)**



- Redundancy for V24

- Better support for Process applications

# Lifecycle Update



# Rockwell Automation New Product Lifecycle Stages

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**Active** - The most current product offering within a category of product

**Active Mature** - Products fully supported and available, but a newer family within the product category is available. Can realize benefits from migrating to a newer family.

**End of Life** - A product discontinued date has been announced. Actively execute migrations and/or last-time buys.

**Discontinued** - New product is no longer available. Repair/exchange services may still be available.

# Lifecycle Status Data Available On-line

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Global Select Country

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Home | Solutions & Services | Capabilities | Migration Solutions | Product Lifecycle Results

## Product Lifecycle Status

Capabilities

Migration Solutions

- Overview
- Why Rockwell Automation?
- Lifecycle Extension & Migrations
- Product Lifecycle Status

Literature & Media

- Migration Solutions Brochure (PDF)
- Installed Base Evaluation Animated Video

### Search Results

NEW SEARCH

PRODUCT ID	PRODUCT DESCRIPTION	LIFECYCLE STATUS	DISCONTINUED DATE
1785-ACC5LA	PLC-5 ACCESSORY KIT	ACTIVE MATURE	
1785-ACC5LB	PLC-5 ACCESSORY KIT	ACTIVE MATURE	
1785-BCM	PLC-5 BACKUP COMMUNICATION MODULE	DISCONTINUED	07/31/2011
1785-BEM	PLC-5 BACK-UP COMMUNICATION EXP MODULE	DISCONTINUED	07/31/2011
1785-CH0RAD	REMOTE ACCESS MODEM KIT FOR CONN TO	END OF LIFE	10/31/2016
1785-CH0M	PLC-5 CONTROLNET BACKUP CARTRIDGE	DISCONTINUED	12/31/2012
1785-KA	DH / DH+ COMMUNICATION ADAPTOR MODULE	DISCONTINUED	
1785-KA3	DHPLUS PLC-2 INTFC	DISCONTINUED	01/30/2010
1785-KE	INTERFACE MODULE	DISCONTINUED	
1785-L11B	PLC-5 PROCESSOR	DISCONTINUED	12/31/2012
1785-L20B	PLC-5 PROCESSOR	END OF LIFE	12/31/2014
1785-L20C	PLC-5 CONTROLNET PROCESSOR	DISCONTINUED	12/31/2009
1785-L20C15	PLC-5 CONTROLNET 1.5 PROCESSOR	DISCONTINUED	12/31/2012
1785-L20E	PLC-5 ETHERNET PROCESSOR	END OF LIFE	12/31/2014
1785-L260	PLC-5 PROTECTED PROCESSOR	DISCONTINUED	12/31/2013

## Lifecycle Notice

PLC-5 and 1771 I/O Modules

Allen-Bradley

### Migration Services

#### Benefits:

- Decrease planned and unplanned downtime and production loss
- Increase production availability, production capacity and product quality
- Increase speed to market
- Reduce your migration costs and risks
- Increase data availability and security

### Lifecycle Extension Agreement

#### Benefits:

- Reduce the lifecycle consequences of operational downtime associated with operating legacy or discontinued automation equipment
- Buy added time for migration planning and testing
- Extend your lifecycle and increase asset utilization

### What's Included When You Work with Rockwell Automation on Your Migration

- 1-to-1 help desk with feature advice
- Downloadable tools and resources required for your application
- Phase migration option to ControlLogix processor only
- Assessing and configuring existing PLC
- Help with initial installation and ControlLogix program
- Additional system migration services (if needed) from the factory, the dealer, the integrator, the end user, if requested
- On-site commissioning (if requested)



Thank you for your investment in Allen-Bradley<sup>®</sup> products.

The PLC-5 and 1771 I/O product lines have been serving industries for 40 years. Several years ago, migration tools were introduced to help users migrate to a ControlLogix<sup>®</sup> control system to realize benefits such as:

- Increased flexibility with non-open architecture
- Reduced development time and costs through use of engineering packages
- Maximized return on existing assets through improved control and monitoring
- Increased return to plant and production information
- Low programming investment for double, motion, process, drive, batch and safety control

### Help Eliminate Your Risk

By migrating to the Integrated Architecture<sup>™</sup>, you can optimize your plant and supply chain by connecting people and assets. Rockwell Automation can help you develop a long-term modernization roadmap that fits your needs. Whether it's a complete turnkey solution that includes assessment through implementation, or simply providing you with the tools to do it yourself, we will support you every step of the way and help you get the highest possible return on your automation investment.

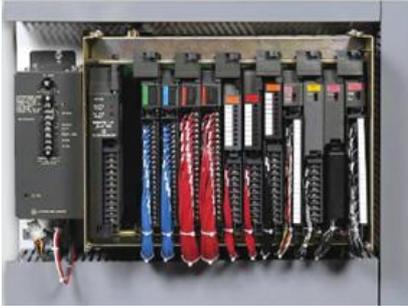
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# PLC-5<sup>®</sup> Lifecycle Communications

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Automation**



1785-L80  
End of Life Notice

Knowledgebase  
Lifecycle Management website  
End of Life Notice

Support for Lifecycle Extension Agreements as available

Dec  
2014

Remaining 1785-L20/40/60  
Discontinuation

Knowledgebase  
Lifecycle Management website  
Discontinuation Notice

May  
2015

June  
2017

Forecasted 1785-L80 Discontinuation

Knowledgebase  
Lifecycle Management website  
Discontinuation Notice

# Logix 5560 - Lifecycle Status

Rockwell  
Automation

The ControlLogix™ 5560 and 5560S controllers are entering End of Life and will be discontinued on December 31, 2016

- Technical support remains (Tech Connect)
- Field service and on-site support continues
- Repair services continue
- *Simply no longer available to be sold as new*



## 5570 Advantages

- 2x faster scan time
- SD Card versus CF Card
- USB versus RS-232
- Onboard Display
- No-Battery Required
- **>15% lower list price**

New projects should be using the ControlLogix™ 5570

# Product Lifecycle Status

## CompactLogix™

**Rockwell  
Automation**

Catalog ID	Description	Discontinue Date
1769-L23E-QB1B	CompactLogix™ 512KB DI/O Controller	30-Jun-16
1769-L23-QBFC1B	CompactLogix™ 512KB DI/O AI/O Controller	30-Jun-16
1769-L23E-QBFC1B	CompactLogix™ 512KB DI/O AI/O Controller	30-Jun-16
1769-L31	CompactLogix™ 512KB Controller	31-Dec-15
1769-L32C	CompactLogix™ 750KB ControlNet Controller	30-Jun-16
1769-L35CR	CompactLogix™ 1.5MB ControlNet Controller	30-Jun-16
1769-ADN	CompactLogix™ DeviceNet Adaptor Module	31-Dec-15





# Dotazy? Děkuji za pozornost!



PUBLIC



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