

Legacy ControlLogix Migration to ControlLogix L8

April 23, 2020

- Important to know the lifecycle status of your Installed Equipment Base
In most industries, less than 20 percent of companies can answer “yes” to more than two of these:

Do you have an accurate plant model that identifies all of the physical assets in your plants?

Do you have an updated complete bill of materials for your critical assets?

Do you know which parts are still being manufactured?

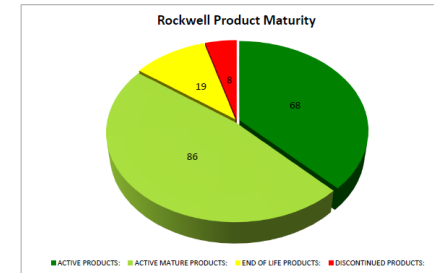
Do you know which parts have been announced for discontinuation or are already discontinued?

Do you have the right spare parts if a critical machine goes down?

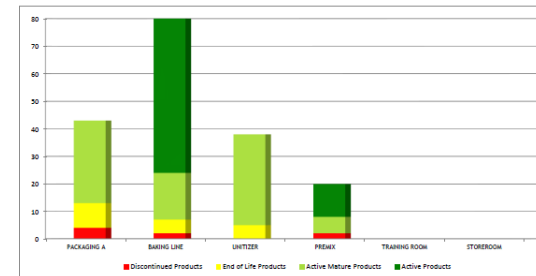
Do you have an efficient and accurate process for maintaining storeroom inventory?

Rockwell Automation Services Installed Base Evaluation™ (IBE)

Definition: An IBE is a site delivered service that provides actionable intelligence to help you make data-driven decisions regarding the support and obsolescence management of your installed base assets



Location	Total #	End of Life & Discontinued Products #	%	Active Products #	%	Active Mature Products #	%	End of Life Products #	%	Discontinued Products #	%
PACKAGING A	43	13	30%	0	0%	30	70%	9	21%	4	9%
BAKING LINE	80	7	8%	56	70%	17	21%	3	4%	2	2%
UNITIZER	26	0	0%	0	0%	33	127%	0	0%	0	0%
PREMIX	20	2	10%	12	60%	6	30%	0	0%	2	10%
TRAINING ROOM	0	0	N/A	0	N/A	0	N/A	0	N/A	0	N/A
STOREROOM	0	0	N/A	0	N/A	0	N/A	0	N/A	0	N/A
Page Totals:	181	27	15%	66	36%	86	48%	19	10%	8	4%

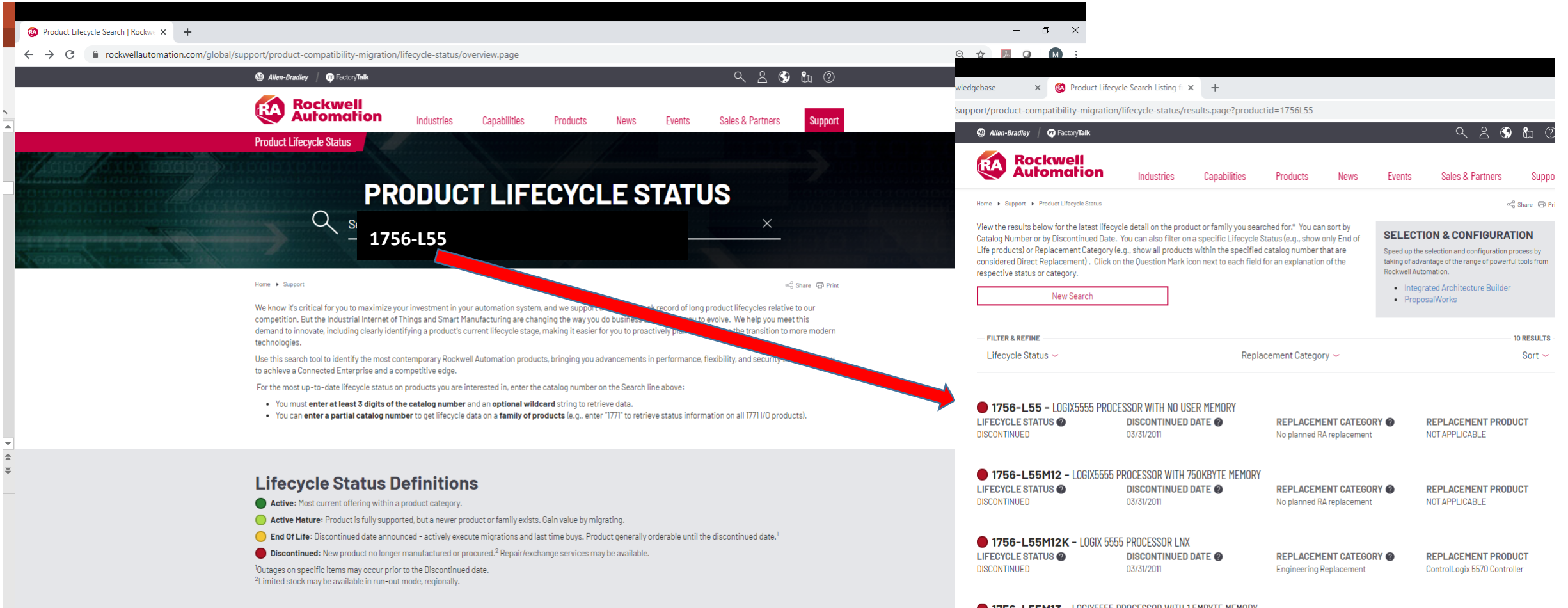


Value

- Identification of product lifecycle status via plant hierarchy
- Identification of legacy obsolescence risks
- Identification of excess/shortage of spare parts
- Mechanical and other OEM electronics may be included
- Identification of migration/conversion priorities
- Baseline for determining a Strategic Maintenance Program

Area Name	Location Name	Machine or Storeroom Name	Asset Name or Storeroom Type	Firmware Version	Required Software	Manufacturer	Part Number	Series	Description	Replacement Part	Quantity	List Price	Total Price	Lifecycle Status
MIXING	PREMIX	PREMIX DUMPER	PREMIX DUMPER CONTROL PANEL			ROCKWELL	1763-1016		COMPACTLOGIX 16 POINT DIO MODULE		4	\$ 253.00	\$ 1,012.00	A
MIXING	PREMIX	PREMIX DUMPER	PREMIX DUMPER CONTROL PANEL			ROCKWELL	1763-L02E		COMPACTLOGIX PROCESSOR 750KB		2	\$ 3,220.00	\$ 6,440.00	A
MIXING	PREMIX	PREMIX DUMPER	PREMIX DUMPER CONTROL PANEL			ROCKWELL	1763-DW16		COMPACTLOGIX 16 POINT DIO MODULE		2	\$ 421.00	\$ 842.00	A
MIXING	PREMIX	PREMIX DUMPER	PREMIX DUMPER CONTROL PANEL			ROCKWELL	1763-P44		COMPACTLOGIX POWER SUPPLY		2	\$ 475.00	\$ 950.00	A
MIXING	PREMIX	PREMIX DUMPER	PREMIX DUMPER CONTROL PANEL			ROCKWELL	1763-3M2		COMPACT I/O TO DSI COMMUNICATION MODULE		2	\$ 653.00	\$ 1,310.00	A
MIXING	PREMIX	PREMIX DUMPER	PREMIX DUMPER CONTROL PANEL			ROCKWELL	22B-D010N104		POWERFLEX 40 4 kW (5 HP) AC DRIVE		6	\$ 1,100.00	\$ 6,600.00	AM
MIXING	PREMIX	PREMIX DUMPER	PREMIX DUMPER CONTROL PANEL			ROCKWELL	271P-T10C4A1	A	PANELVIEW PLUS TERMINAL	271P-T10C4A8	2	\$ 6,615.00	\$ 13,230.00	D
PACKAGING	BAKING LINE	BAKING FORMER	BAKING FORMER CP			ROCKWELL	1756-A13		CONTROLLOGIX 13 SLOTS CHASSIS		1	\$ 775.00	\$ 775.00	A

• RA Product Lifecycle Status Web Page – Google “Rockwell Lifecycle Status”



The screenshot shows the Rockwell Automation Product Lifecycle Status search interface. The search input field contains the product ID '1756-L55'. The search results page displays a list of products with their lifecycle status, discontinued date, replacement category, and replacement product.

Product Lifecycle Status Search Results:

Product ID	Product Name	Lifecycle Status	Discontinued Date	Replacement Category	Replacement Product
1756-L55	LOGIX5555 PROCESSOR WITH NO USER MEMORY	DISCONTINUED	03/31/2011	No planned RA replacement	NOT APPLICABLE
1756-L55M12	LOGIX5555 PROCESSOR WITH 750KBYTE MEMORY	DISCONTINUED	03/31/2011	No planned RA replacement	NOT APPLICABLE
1756-L55M12K	LOGIX 5555 PROCESSOR LNX	DISCONTINUED	03/31/2011	Engineering Replacement	ControlLogix 5570 Controller
1756-L55M13	LOGIX5555 PROCESSOR WITH 1.5MBYTE MEMORY	DISCONTINUED	03/31/2011	No planned RA replacement	NOT APPLICABLE
1756-L55M14	LOGIX5555 PROCESSOR WITH 3.5MBYTE MEMORY	DISCONTINUED	03/31/2011	No planned RA replacement	NOT APPLICABLE

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.¹
- Discontinued:** New product no longer manufactured or procured.² Repair/exchange services may be available.

¹Outages on specific items may occur prior to the Discontinued date.
²Limited stock may be available in run-out mode, regionally.

- “Discontinued” products continue to be “Supported”
- What does it mean for a product to be “Discontinued”?
 - New product is no longer manufactured, available for sale upon reaching “Discontinued” lifecycle status.
- Products are supported long after they are “Discontinued”.
 - Discontinued products can be repaired through Rockwell Repair/Exchange Services.
 - Firmware can be downloaded for “Discontinued” products.
 - Discontinued products are supported technically, through TechConnect Support Services.

Exchange Services

Priority Service Gets You a Replacement via Rush Delivery

With our priority service, a replacement part is sent to you via expedited service.

- Over 50,000 catalog items at eight exchange hubs worldwide
- More than \$100 million in products available for exchange
- A global network of service parts hubs
- Emergency service available 24x7x365

Remanufacturing Services

Factory-authorized Repair on Allen-Bradley and Reliance Electric Products

Same high-quality parts, standards, and specifications as the original manufacturing process.

- 12-, 18-, or 24-month warranty per service level.
- Rockwell Automation OEM-specified components
- Installation of applicable updates/enhancements
- Replacement of inoperative/aged components
- Functional and load testing
- Cleaning and cosmetic restoration

- Legacy ControlLogix Availability – Exchange (next day) and Repair Services

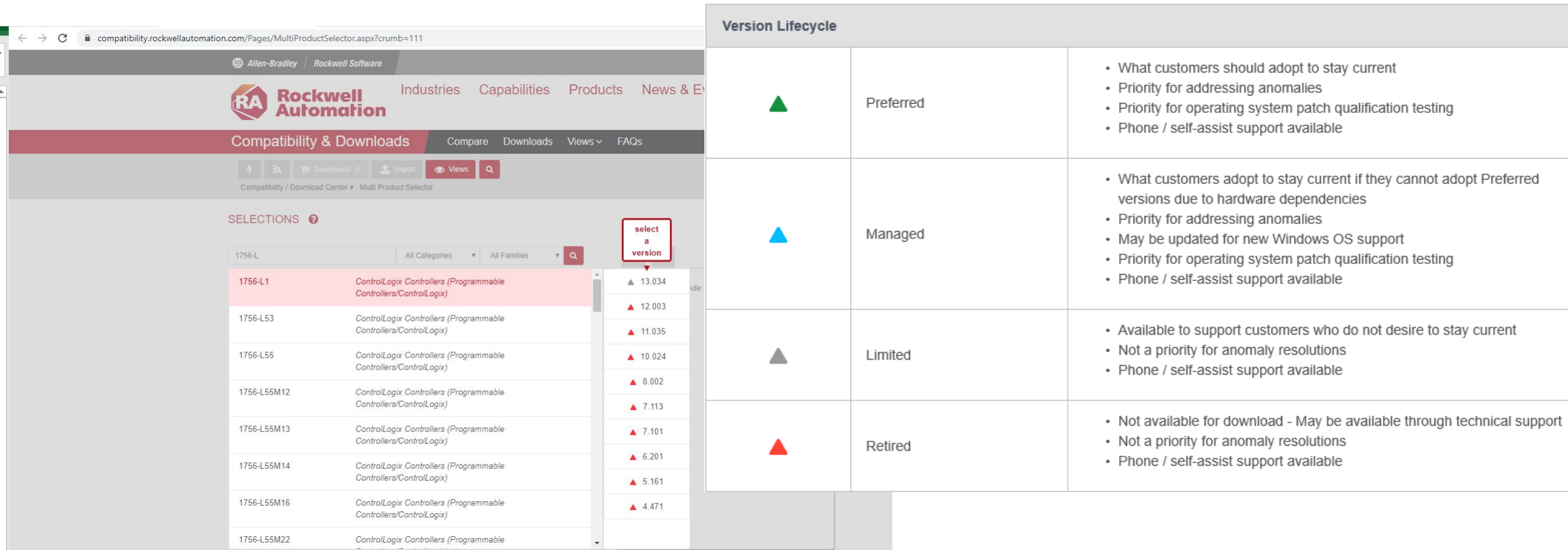
Catalog Number	Priority Exchange	Standard Repair	Economy Repair
1756-L1		✓	✓
1756-L55		✓	✓
1756—L55M12	✓	✓	✓
1756-L55M13	✓	✓	✓
1756-L55M14	✓	✓	✓
1756-L55M16		✓	✓
1756-L55M22	✓	✓	✓
1756-L55M23		✓	✓
1756-L61	✓	✓	✓
1756-L62	✓	✓	✓
1756-L63		✓	✓
1756-L64	✓	✓	✓
1756-L65	✓	✓	✓

- List of Legacy 1756 ControlLogix Processor Families/Firmware





Family	Processor Catalog Number	Description	Appx Intro Date	Discontinued Date	Firmware Revisions
ControlLogix 5550	1756-L1	Expansion Memory L1M1 512KB, L1M2 1MB, L1M3 2MB	1999	3/31/2011	V4.471 to V13.034
ControlLogix 5550	1756-L53	Logix 5553 1.5MB Fixed Memory	2000	3/31/2011	V6.111 thru 11.028
ControlLogix 5550	1756-L55	Expansion Memory L55M12 750KB, L55M13 1.5MB, L55M14 3.5MB, L55M16 7.5MB, L55M22 -M24 Non Volatile Memory	2002	3/31/2011	V10.027 thru V16.023
ControlLogix 5560	1756-L60M03SE	Logix Fixed Memory 750KB, 3-Axis SERCOS Motion	2007	1/2/2013	V13.011 Thru 17.004
ControlLogix 5560	1756-L6x	L61 2MB, L62 4MB, L63 8MB, L64 16MB, L65 32MB	2005	10/21/2016	V12.042 thru 20.019
Family	Processor Catalog Number	Description	Appx Intro Date	Discontinued Date	Firmware Revisions
ControlLogix 5570	1756-L7x	L71 2MB, L72 4MB, L73 8MB, L74 16MB, L75 32MB	2012	Current Preferred	V20.011 thru 32.011
ControlLogix 5580	1756-L8xE	L81E 2MB, L82E, 4MB, L83E 8MB, L84E 16MB, L85E 32MB	2016	Current Preferred	V29.011 thru 32.013

- Note that V20 firmware is special
- V20 firmware is considered a major release, meaning that it will be revised for updates for the foreseeable future.
- V20 firmware marks the end of the legacy CLX L6 processors, and the beginning of the newer L7 processors; bridges old and new.
- Processors with V20 are programmed using RSLogix 5000 V20.05 programming software, **supported** on Win 10 Pro.

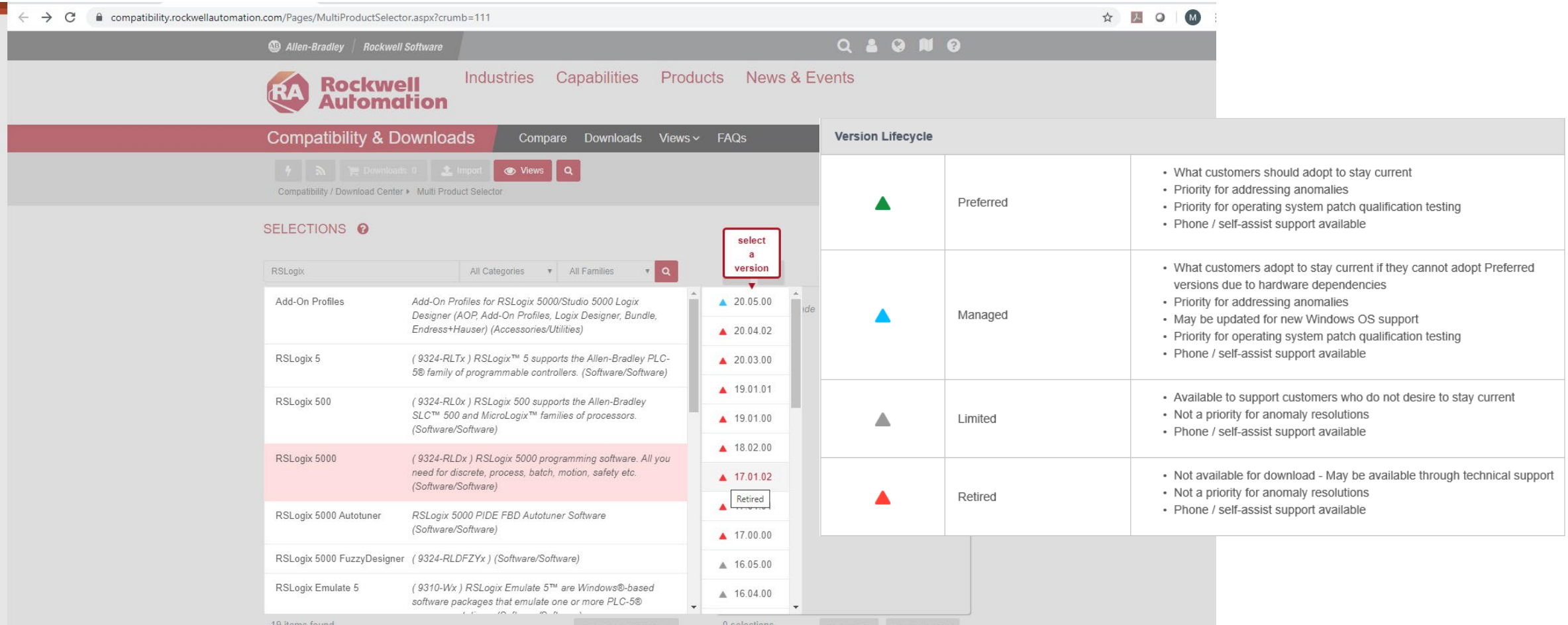
- Product Compatibility and Download Center Web Page – Firmware Downloads
www.compatibility.rockwellautomation.com



The screenshot shows the Rockwell Automation website's 'Compatibility & Downloads' section. It features a 'Multi Product Selector' tool with a list of 'ControlLogix Controllers (Programmable Controllers/ControlLogix)' and their respective version numbers. A red box highlights the 'select a version' dropdown menu. To the right, a 'Version Lifecycle' table provides detailed information for each version status.

Version Lifecycle		
	Preferred	<ul style="list-style-type: none"> What customers should adopt to stay current Priority for addressing anomalies Priority for operating system patch qualification testing Phone / self-assist support available
	Managed	<ul style="list-style-type: none"> What customers adopt to stay current if they cannot adopt Preferred versions due to hardware dependencies Priority for addressing anomalies May be updated for new Windows OS support Priority for operating system patch qualification testing Phone / self-assist support available
	Limited	<ul style="list-style-type: none"> Available to support customers who do not desire to stay current Not a priority for anomaly resolutions Phone / self-assist support available
	Retired	<ul style="list-style-type: none"> Not available for download - May be available through technical support Not a priority for anomaly resolutions Phone / self-assist support available

- Product Compatibility and Download Center Web Page – Programming software downloads
www.compatibility.rockwellautomation.com



The screenshot shows the Rockwell Automation website's 'Compatibility & Downloads' section. The main content area displays a list of software products under the 'SELECTIONS' heading. A red box highlights the 'RSLogix 5000' product, with a callout 'select a version' pointing to a version selection dropdown menu. The dropdown menu lists various version numbers, with '17.01.02' highlighted and labeled as 'Retired'.

On the right side of the page, there is a 'Version Lifecycle' table with the following data:

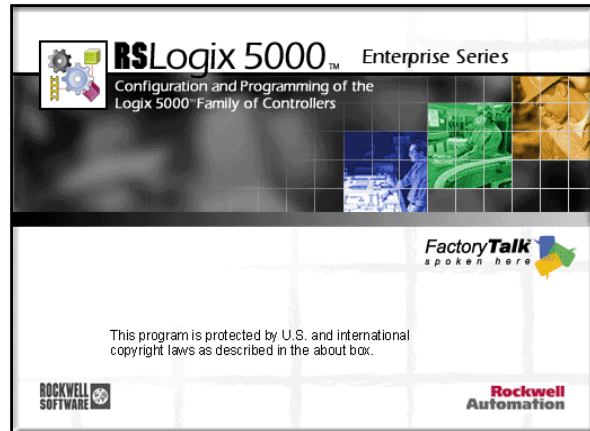
Version Lifecycle	Description
Preferred	<ul style="list-style-type: none"> • What customers should adopt to stay current • Priority for addressing anomalies • Priority for operating system patch qualification testing • Phone / self-assist support available
Managed	<ul style="list-style-type: none"> • What customers adopt to stay current if they cannot adopt Preferred versions due to hardware dependencies • Priority for addressing anomalies • May be updated for new Windows OS support • Priority for operating system patch qualification testing • Phone / self-assist support available
Limited	<ul style="list-style-type: none"> • Available to support customers who do not desire to stay current • Not a priority for anomaly resolutions • Phone / self-assist support available
Retired	<ul style="list-style-type: none"> • Not available for download - May be available through technical support • Not a priority for anomaly resolutions • Phone / self-assist support available

- RSLogix 5000 Difference from Studio 5000 Logix Designer[®]

V20 firmware, and earlier ---
L5 and L6 Processors



RSLogix 5000[®]



V21 thru V32+ firmware (and future)
ControlLogix L7 and L8 Processors

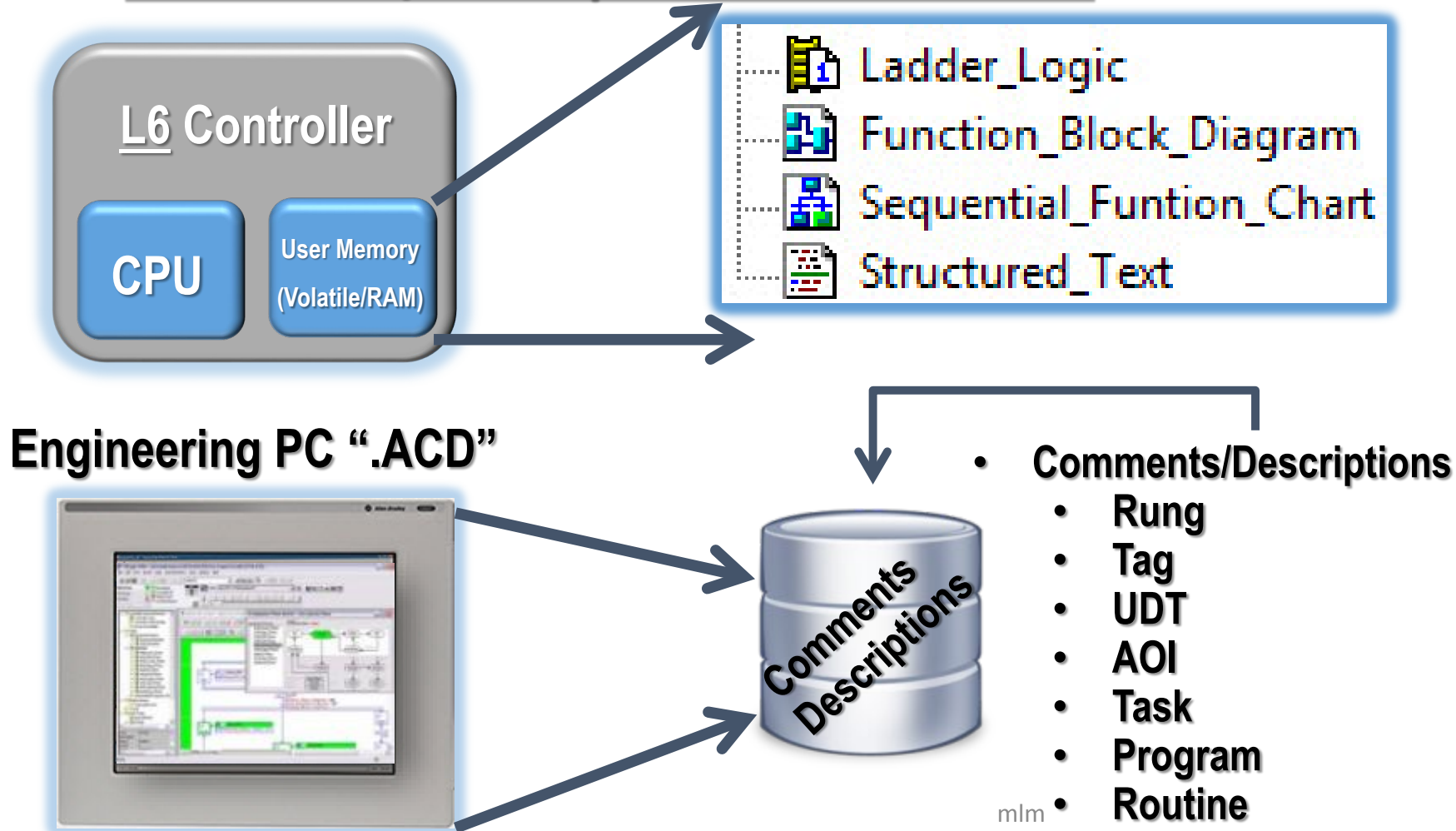


Studio 5000[®]
Logix Designer application

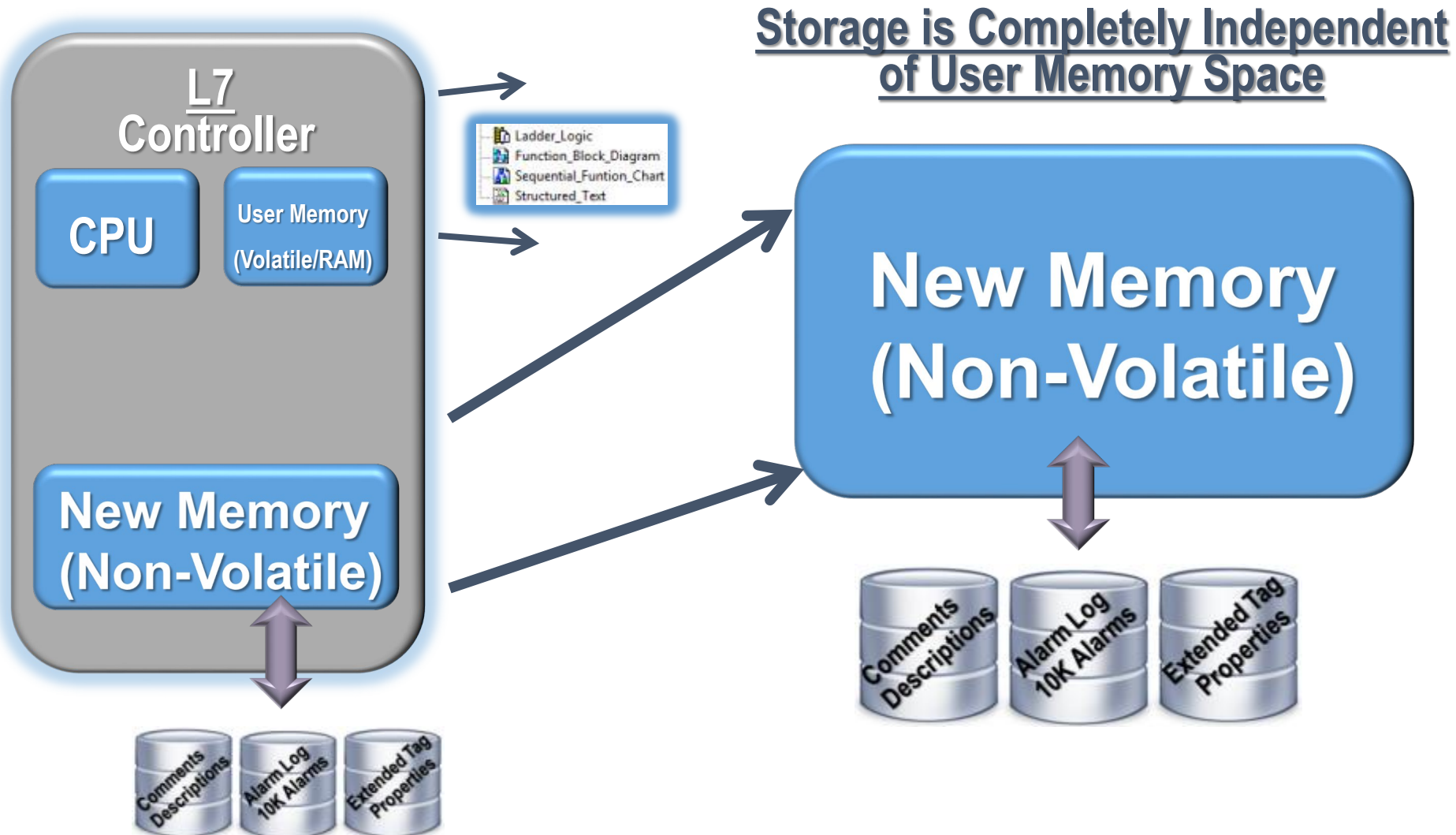


V20 and below Project Documentation Storage – RSLogix 5000

Comments/Descriptions Stored on PC



- New Additional Non-Volatile Extended Memory Embedded in CLX L7 and CLX L8



ControlLogix[®] 5580 Controller



High performance

- Quad Core Microprocessor---separate cores now service communications, program and memory

- 1 gigabit (Gb) embedded EtherNet/IP port
- High-speed communication, I/O and motion
- Decreased scan times for runtime performance
- Core programming languages execute with the same performance
- Screw-to-screw performance increased with 5069 Compact I/O™ system
- 1 Gb communications with controller and distributed I/O

ControlLogix® 5580 Controller



Enhanced security

- Digitally signed and encrypted firmware helps protect against malicious intent
- Controller-based change detection provides added security
- Mode change switch adds a physical layer for security
- Certified compliant with the IEC 62443-4-2 security standard

Migration Reference Manual Publication 1756-RM100

Reference Manual
Original Instructions



Replacement Guidelines: Logix 5000 Controllers

ControlLogix 5570 to ControlLogix 5580; GuardLogix 5570 to GuardLogix 5580

CompactLogix 5370 to CompactLogix 5380; Compact GuardLogix 5370 to Compact GuardLogix 5380

CompactLogix 1768-L4 to CompactLogix 5380; Compact GuardLogix 1768-L4 to Compact GuardLogix 5380

CompactLogix 1769-L3 to CompactLogix 5380



Replacement Considerations with ControlLogix 5580 and GuardLogix 5580 Systems

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- Minimum Hardware and Software Requirements
- ✓ Change out the existing chassis to a Series C, which was built for the CLX 5580
- ✓ Use the latest revision of firmware/Studio 5000 Logix Designer, V32.013 today

Minimum Requirements

The 5580 controllers have these minimum requirements.

ControlLogix Controllers Minimum Requirements

Requirement, Minimum	ControlLogix 5570 Controller	ControlLogix 5580 Controller
Chassis	1756-A4, 1756-A7, 1756-A10, 1756-A13, 1756-A17 Series A, Series B, and Series C	1756-A4, 1756-A7, 1756-A10, 1756-A13, 1756-A17 0 °C < Ta < +60 °C (+32 °F < Ta < +140 °F) for Series C Chassis 0 °C < Ta < +50 °C (+32 °F < Ta < +122 °F) for Series B Chassis
Programming Software	Studio 5000 Automation Engineering & Design Environment®, Version 21.00.00 or later RSLogix 5000® Software Version 20.00.00 or later	Studio 5000 Logix Designer® Application Version 28.00.00 or later
Programming Software	Studio 5000 Automation Engineering & Design Environment, Version 21.00.00 or later RSLogix 5000 Software Version 20.00.00 or later	Studio 5000 Logix Designer Application Version 31.00.00 or later

- Create the new L8 processor application, using V32 or above.
- Then import the legacy processor program *.L5k file into the new L8 project.

Converting Logix Designer Projects

When you open a Studio 5000 Logix Designer® project to open a project that was created in an earlier version of Logix Designer application, the project is converted to the higher version. After the conversion, the Logix Designer application can fail to use internal memory structures in the most efficient manner.

To help optimize the internal memory structures, you can complete the following:

- Import the version 27 or earlier project from an ASCII.L5K or an XML.L5K file to create the version 28 or later project.
- Import rungs, routines, programs, equipment phases, UDTs, tags, and Add-On Instructions into a version 28 or later project.

For information on how to import your project, see:

- Logix 5000® Controllers Import/Export Reference Manual, publication [1756-RM084](#).
- Logix 5000 Controllers Import/Export Project Components Programming Manual, publication [1756-PM019](#).

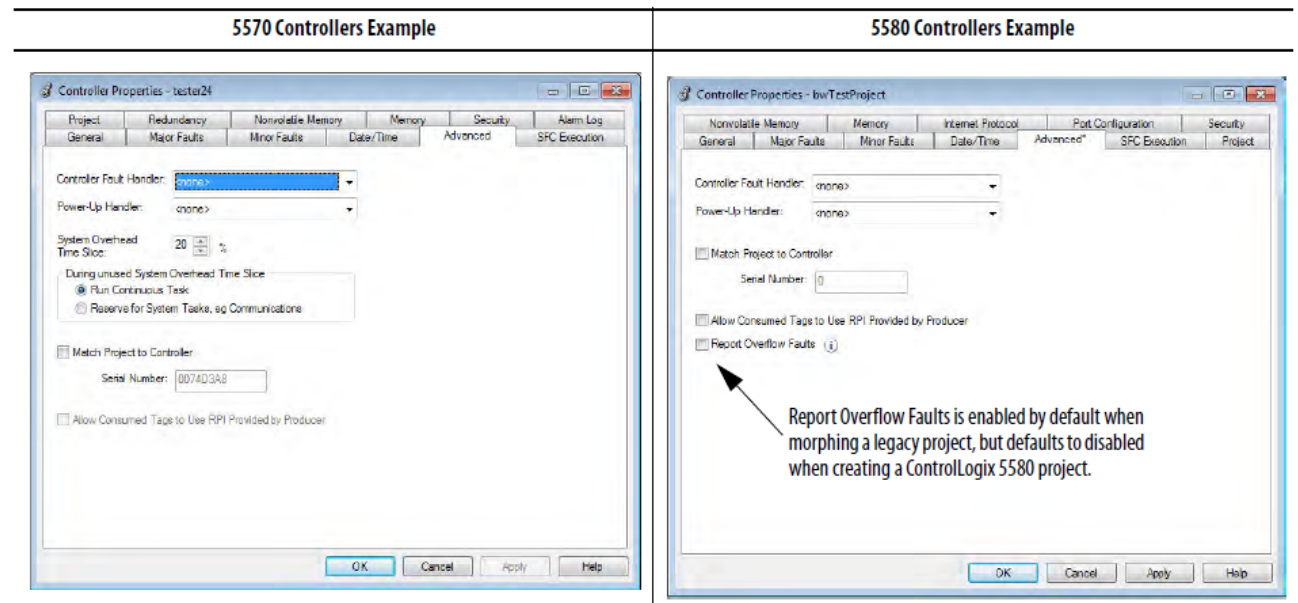
- Processor Properties Advanced Tab:
 - ✓ No “System Overhead Timeslice” in CLX 5580.
 - ✓ New “Report Overflow Faults” selection

Advanced Tab

The Advanced tab provides a way to assign the Controller Fault Handler and Power-up Handler. You can also match a project to a specific controller by serial number.

- Report Overflow Faults is a new parameter that lets you control Minor Overflow fault reporting. When you create a project, the default setting is disabled. When you import or open a legacy project, the default setting is enabled. For more information, see [Minor Fault on Overflow on page 128](#).
- System Overhead Time Slice is no longer required for 5580 controllers, and the parameter is removed.

Figure 1 - Controller Properties Dialog Box - Advanced Tab



Note for “Third-Party” communications software:

- Communication drivers must be updated

This publication provides a reference to controller capabilities and how the 5580/5380 controller capabilities differ from the 5570/5370 controllers.

IMPORTANT Any user or third-party developer of communications software to a ControlLogix or CompactLogix controller must fully follow the Logix 5000™ Data Access Programming Manual, [1756-PM020](#).

Beginning with Logix controller families 5380 and 5580, the full implementation and enforcement of the CIP™ specification standard for ANSI Extended Symbolic 0x91 is required, as documented in the above referenced publication and the ODVA CIP specification.

Any custom or 3rd party communications software, which previously only supported ANSI Extended Symbolic 0x61, will need to be updated to communicate to these new controllers.

Previous Logix controller families CompactLogix L1, L2, L3, 5370 and ControlLogix 5550, 5560, 5570 continue to support both the 0x91 CIP Standard and the older, no longer in use, 0x61.

Programming Manual

 **Allen-Bradley**

Logix 5000 Controllers Data Access

1756 ControlLogix, 1756 GuardLogix, 1769 CompactLogix, 1769 Compact GuardLogix, 1789 SoftLogix, 5069 CompactLogix, 5069 Compact GuardLogix, Studio 5000 Logix Emulate



Summary:

- ✓ ControlLogix 5550 and 5560 are “Discontinued” for sale as new products
- ✓ ControlLogix L5 and L6 processors are still supported; repair/exchange, TechConnect.
- ✓ Select revisions of firmware for CLX L5 and L6 processors are still available for download, V16.023 and V20.019.
- ✓ Select revisions of RSLogix 5000 programming software are still available for download, V16.05 and V20.05
- ✓ Use Rockwell Lifecycle Web Page to determine the lifecycle status of any Rockwell Automation product.
- ✓ Use Product Compatibility and Download Center web site to obtain firmware and programming software updates.

And....

- ✓ Refer to Migration Reference Manual 1756-RM100 when migrating ControlLogix L5x, L6x or L7x to ControlLogix L8xE

Questions???

Thank You for Attending!