

CompactLogix[®] 5390 Controller

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May 2026



Allen-Bradley

by ROCKWELL AUTOMATION



| Introducing CompactLogix[®] 5390 Controllers

Unlock new levels of performance, efficiency and design flexibility



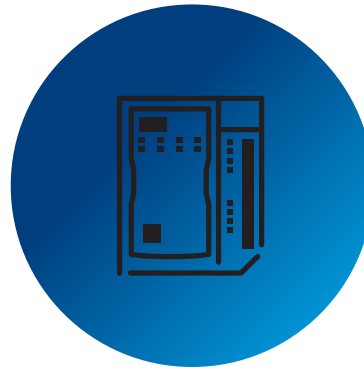
Automate more for less

- Higher performance to handle complex automation tasks and expanded workloads
- Scalable system options that allow Logix solutions to fit a wider range of applications



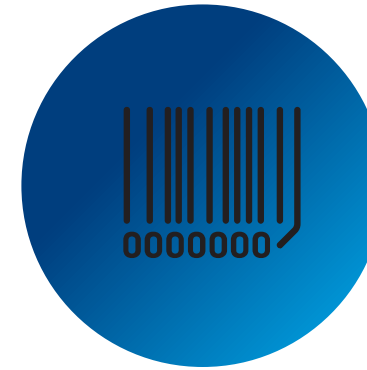
Consistent architecture

- PointMax[™] I/O provides one platform for both local and remote I/O
- Enables a unified architecture from small machines to large systems



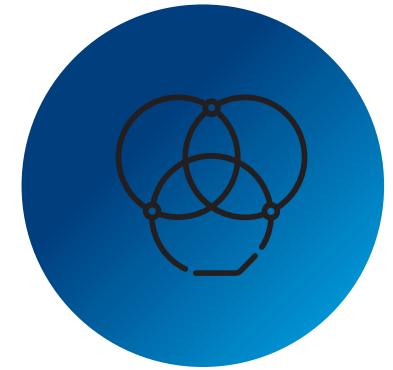
Space efficiency

- Smaller controller and I/O form factors reduce overall system footprint
- Ideal for compact machines and space-constrained installations



Simplification

- Streamlined catalog with consolidated standard, motion and safety SKUs
- More ways to scale systems efficiently and cost-effectively



Connected enterprise ready

- Designed with enhanced security features
- Supports versatile communication options such as OPC UA and open sockets



5390 Overview

▶ System performance Boost

- Up to 2x from 5380
- 2x (Est) ladder execution speed
- 1.5x (Est) Safety reaction time

▶ Sustainability

- Recycled plastics
- Reduced power consumption
- Low carbon footprint

▶ Simplification

- Scaling levers based on Memory
- Optimized Inventory @ DI, Customer

01

▶ Footprint Optimization

- Small form-factor - Controller & I/O
- Reduction in accessories

02

▶ Security future proofing

- Integrated security from its core
- CIP Security
- IEC-62443-4-2
- Syslog
- CRA (Cyber Resiliency Act)

03

▶ 5034 Local I/O support

- Support up to 32 I/O modules
- Any combination of I/O modules
- Adopt full functionality of 5034 I/O system

04

▶ Enhanced Communication options

- Dual IP, DLR, Star, Linear
- 1Gbps Front and Backplane
- USB-C
- OPC UA native

05

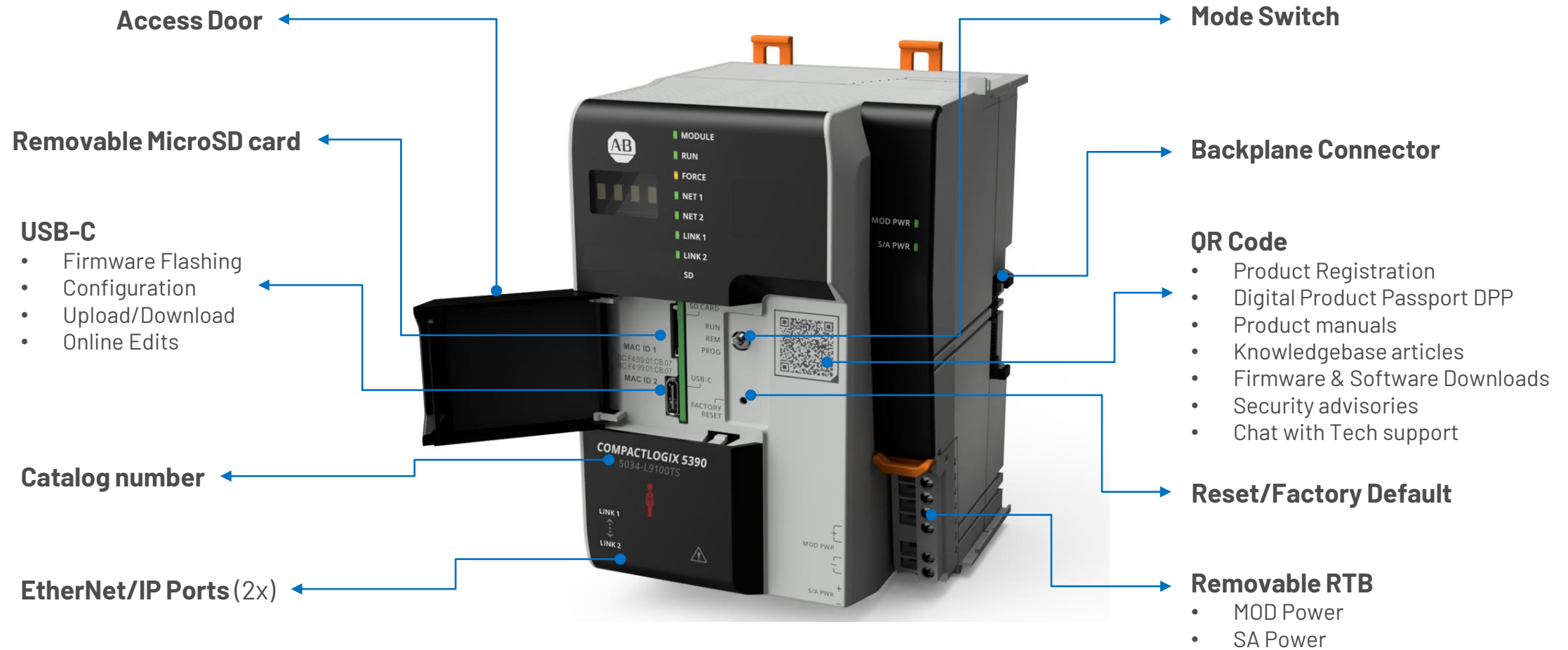
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06





| 5390 Controller Anatomy





| 5390 Controller Footprint





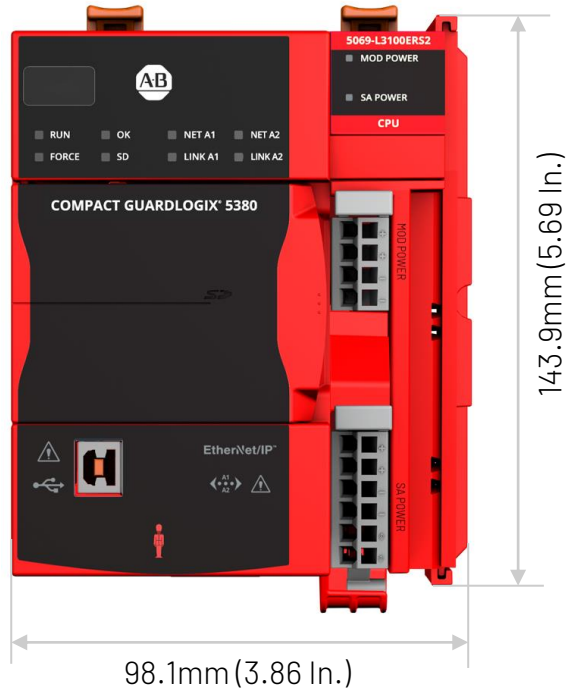
5390 Footprint Optimization

As compared to 5380 SIL2 / PLd

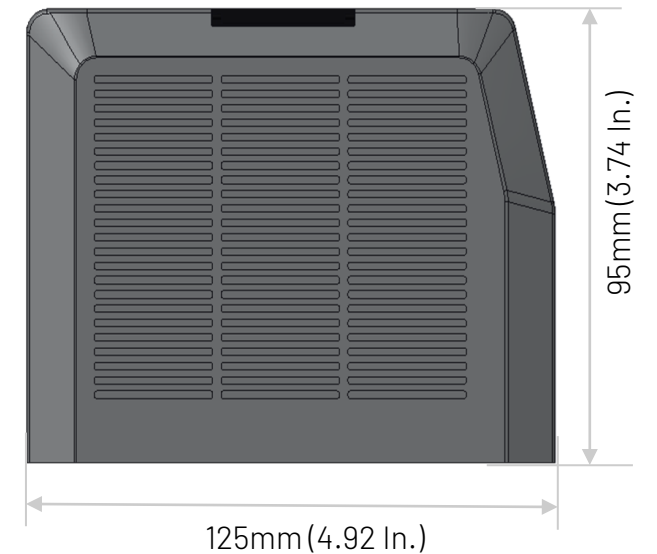
Current

5380 HxWxD : 143.9 x 98.1 x 136.8 mm (5.67 x 3.86 x 5.39 in.)

▶ Product dimensions at a glance



48% in volumetric space savings

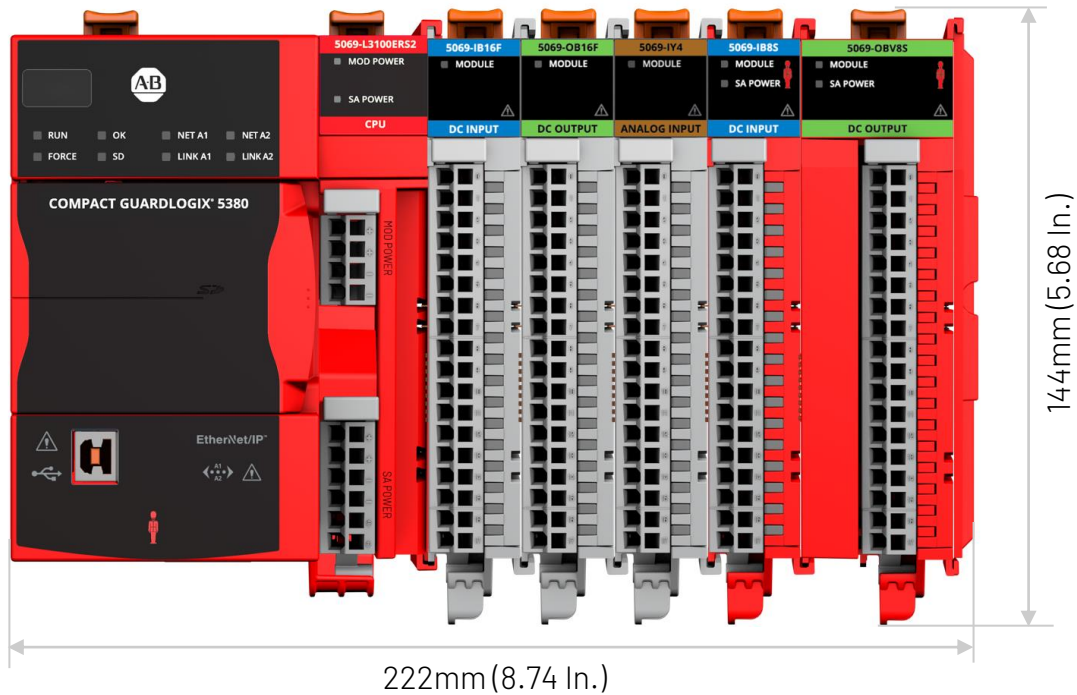




5390 Footprint Comparison

As compared to 5380 SIL2 / PLd + Local IO

► Example configuration: Processor + 16 DI, 16 DO, 4 AI, 8 DIS, 8 DOS



56% in volumetric space savings



5390 Architecture Possibilities

Controller & IO Architectures – SIL2 / PLd

Before



Today



@ 5390 Launch (SIL2 / PLd)



Architecture A



&



Architecture B



&





5390 Simplified Selection

As compared to 5380 SIL2 / PLd



Consolidation

Function

5380



5390

5069-L310ER

5069-L310ERM

5069-L310ERS2

5069-L310ERMS2

5034-L9010TS

Memory

5380



5390

600KB

1MB

2MB

3MB

4MB

5MB

8MB

10MB

400KB

600KB

1MB

2MB

3MB

5MB

10MB



5390 Memory Architecture

As compared to 5380 SIL2 / PLd



Consolidation

5380 Memory Architecture

Standard

100%

600KB
-
10MB

Safety

50%

300KB
-
5MB



5390 Memory Architecture

Standard

100%

400KB
-
10MB

Safety

100%

400KB
-
10MB



5390 Simplified Selection

Improved controller characteristics

	Motion Axes	Ethernet Nodes	Local IO	OPC UA Nodes
Capacity				
400KB – 1MB	8	60	16	300
2MB – 5MB	32	200	32	2000
10MB	128	300	32	4000



Catalogs planned for release in Q4 CY2026

5390 Controller variants

Type	Catalog	Description
Standard Variants -25 °C to +60 °C (-13 °F to +140 °F)	5034-L9004TS	CompactLogix® 400KB Controller
	5034-L9006TS	CompactLogix® 600KB Controller
	5034-L9010TS	CompactLogix® 1MB Controller
	5034-L9020TS	CompactLogix® 2MB Controller
	5034-L9030TS	CompactLogix® 3MB Controller
	5034-L9050TS	CompactLogix® 5MB Controller
	5034-L9100TS	CompactLogix® 10MB Controller
XT Variants -40 °C to +70 °C (-40 °F to +158 °F)	5034-L9004TSXT	CompactLogix® 400KB XT Controller
	5034-L9006TSXT	CompactLogix® 600KB XT Controller
	5034-L9010TSXT	CompactLogix® 1MB XT Controller
	5034-L9010TNSXT	CompactLogix® 1MB XT NSE Controller
	5034-L9020TSXT	CompactLogix® 2MB XT Controller
	5034-L9030TSXT	CompactLogix® 3MB XT Controller
	5034-L9050TSXT	CompactLogix® 5MB XT Controller
	5034-L9100TSXT	CompactLogix® 10MB XT Controller



Note: XT variants. The harsh environment (XT) variants provide extended protection in corrosive gas environments.



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Thank you

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Inclusive terminology

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We are proactively collaborating with industry peers to find alternatives to such terms and making changes to our products and content. Please excuse the use of such terms in our content while we implement these changes.