

ControlLogix 5580 Controllers

Future-proofing your system and enabling The Connected Enterprise

ControlLogix® 5580 controllers help enable faster system performance, capacity, productivity and security to meet the growing demands of smart machines and equipment for manufacturing.

All ControlLogix 5580 controllers use the same development environment, Studio 5000® software, combining elements of design into one standard framework that can optimize productivity and reduce time to commission. Studio 5000 also manages safety, so you don't have to be concerned about separation of standard and safety memory, or worry about partitioning logic to isolate safety – the software does it for you. Learn more about [Studio 5000](#).

Features and Benefits

Enhanced Performance and Troubleshooting

- Provides up to 45% more capacity
- 1 gigabit (Gb) embedded Ethernet port enables high-speed I/O and motion control
- Optimized to enable maximum system performance
- Enhanced diagnostics and troubleshooting

Scalable Safety Solution

- Achieve SIL2/PLd or SIL3/PLe performance
- Optimized for faster safety reaction time
- Support for new Compact 5000™ safety I/O
- Networked Safety Functions with Drives and Motion

Added Security and Capabilities

- Energy storage module removes the need for a battery
- Controller-based change detection and logging enable added security
- Digitally-signed controller firmware adds another layer of security
- Provides role-based access control to routines and Add-On Instructions
- Conformal Coating options to help protect in harsh environments



1 Gb



LISTEN.
THINK.
SOLVE.

ControlLogix 5580 Controller

The ControlLogix 5580 controller's high performance capabilities enhance your automation control system in several ways.



Smart

- Display provides enhanced diagnostics and troubleshooting
- Integrated Motion over EtherNet/IP™ for up to 256 axes
- 1 Gb embedded Ethernet port enables high performance, communications, I/O and motion control

Productive

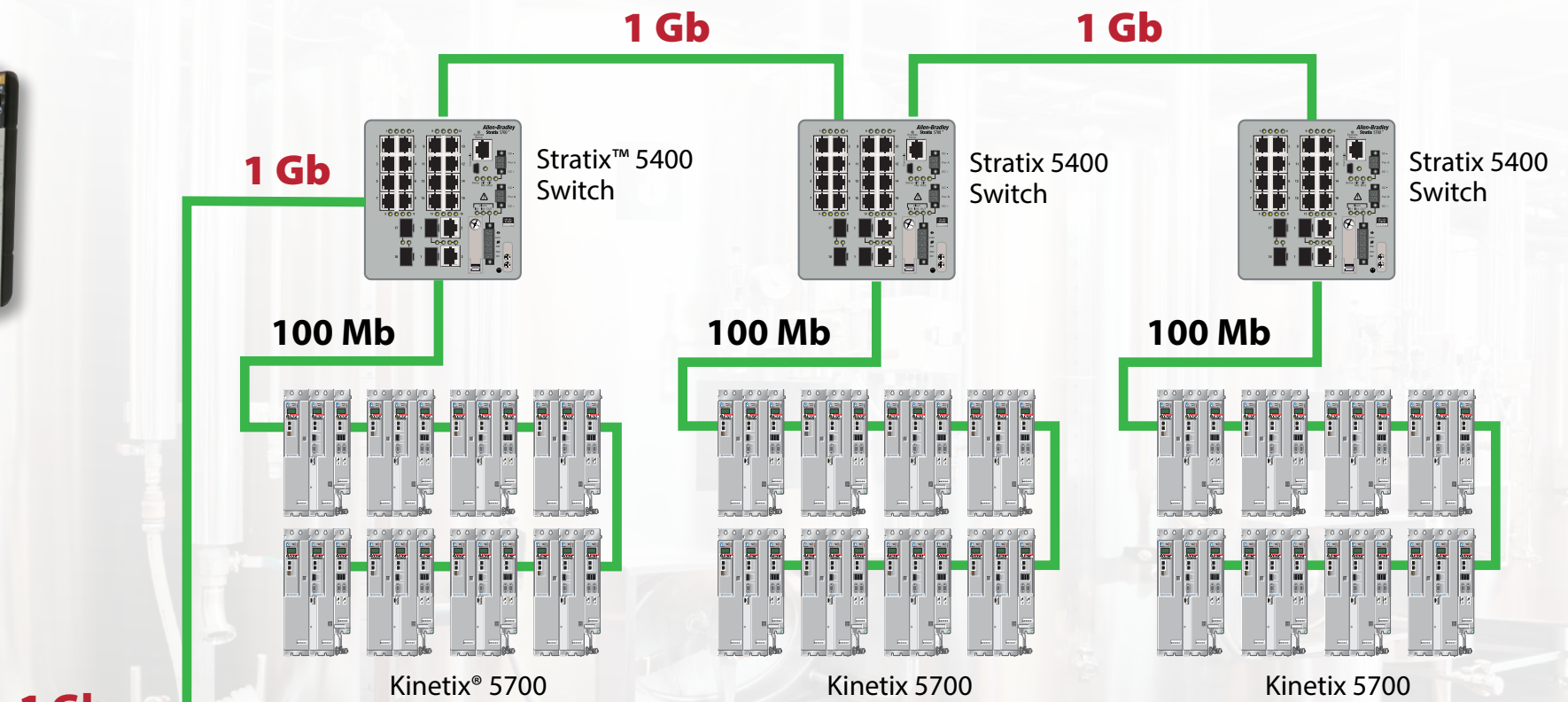
- Secure Digital (SD) card provides optional nonvolatile memory to permanently store user program and tag data on the controller
- Energy storage module removes the need for a battery
- Studio 5000 design and configuration environment provides ease of system design and commissioning



Secure

- Mode change switch adds a physical layer for security
- Digitally-signed and encrypted firmware helps protect against malicious intent
- FactoryTalk® Security provides centralized authentication and access control by verifying the identity of each user-access attempt to the system

Integrated Motion and Safety over EtherNet/IP



GuardLogix 5580 Controller

Right-sizing your Safety Solutions to Optimize Cost and Performance

Manufacturers are continually looking for control solutions that adhere to the latest global safety standards while dealing with competitive pressures to reduce costs and improve productivity. As the latest addition to the ControlLogix 5580 family of controllers, the GuardLogix® 5580 delivers scalable options for high performance, integrated safety in standard and conformally coated formats.

Learn more about [Safety Solutions](#) at Rockwell Automation.

Scalable

- Achieve SIL2 / PLd with Primary Controller
- Achieve SIL3 / PLe with Primary Controller + Safety Partner
- Standard memory options from 3 - 20 MB
- Safety memory options from 1.5 - 6 MB
- Communication options from 100 – 250 EtherNet/IP nodes
- Conformal coated options for harsh environments



Integrated

- Single controller for standard and safety control
- Single software for standard and safety control
- Single network for standard and safety control
- Mix and match safety and standard I/O
- Networked Safety Functions with Drives and Motion

High Performance

- Optimized for faster safety reaction time to achieving protective device coverage and reducing the risk of injury.

ControlLogix 5580 Standard Controller

Catalog Number		Memory Size (MB)	Total number of Controller EtherNet/IP Nodes*
Standard	Conformal Coated		
1756-L81E	1756-L81EK	3 MB	100
1756-L82E	1756-L82EK	5 MB	175
1756-L83E	1756-L83EK	10 MB	250
1756-L84E	1756-L84EK	20 MB	250
1756-L85E	1756-L85EK	40 MB	300

* Total includes nodes connected using 1756-ENxT modules

GuardLogix 5580 Safety Controller

Catalog Number		Memory Size (MB)		Total Number of Controller EhterNet/IP Nodes*
Safety	Conformal Coated	Standard	Safety	
1756-L81ES	1756-L81ESK	3	1.5	100
1756-L82ES	1756-L82ESK	5	2.5	175
1756-L83ES	1756-L83ESK	10	5	250
1756-L84ES	1756-L84ESK	20	6	250
1756-L8SP	1756-L8SPK	–	–	–

* Safety Controllers adhere to functional safety standards IEC 61508, ISO 13849, and IEC 62061



Environmental Specifications and Certifications

Temperature	Operating: 0-60°C (32-140°F) Storage: -40-85°C (-40-185°F)
Relative Humidity	5-95% non-condensing
Vibration	2 g at 10-500 Hz
Shock	Operating: 30 g Nonoperating: 30 g
Certifications	UL, ULH, cUL, cULH, CE, ATEX, EAC, FMH, KOREA, MARINE, RCM For more details and a full list of product certifications, visit www.ab.com

See the [ControlLogix and GuardLogix Technical Data](#) additional information.

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