

Compact 5000 I/O Performance

- 1 Gb Dual Port EtherNet/IP Connectivity
- With GuardLogix controller, under 1ms screw to screw performance

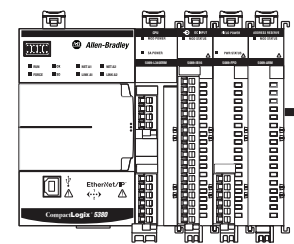
Compact 5000 I/O Configuration

- Supports Module Discovery and Add I/O Online up to SIL3/PLe safety rating

Compact 5000 I/O Capacity

- 31 I/O Modules in a single rack

Compact 5000 I/O (with Standard & Safety)



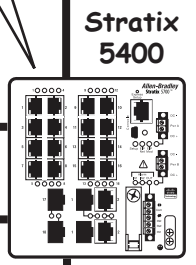
1 Gb

Catalog Number	Standard Memory Size	Safety Memory Size	Total # of Controller EtherNet/IP nodes*
1756-L81ES(K)	3 MB	1.5 MB	100
1756-L82ES(K)	5 MB	3 MB	175
1756-L83ES(K)	10 MB	5 MB	250
1756-L84ES(K)	20 MB	6 MB	250

* Total includes nodes connected using 1756-ENxT modules

Stratix Switch Family

- Scale your switch selection to your application with these Rockwell Automation switches with 1 Gb port capability: - Stratix 8300, 8000, 5700 and 5400 switches
- When connecting machines to a high level plant network, consider IT networking best practices.



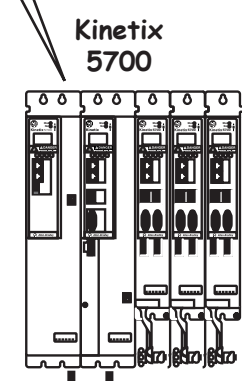
100 Mb

Kinetix 5700 Performance

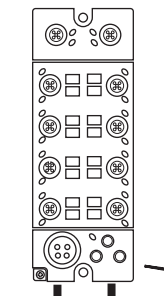
- High speed registration input on Kinetix drive can trigger a motion task in Studio 5000 Logix Designer for faster event task performance

Kinetix 5700 Configuration

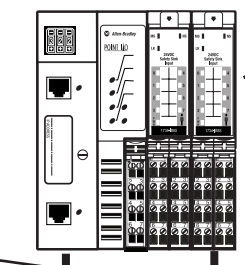
- Network or Hardware Safety - Safe Torque Off - SIL3/PLe/Cat 3
- ERS4 drives have safe motion capabilities using network drive safety instructions in GuardLogix 5580/Compact GuardLogix 5380 controllers"
- Full integrated motion support for Kinetix 350, Kinetix 5500, Kinetix 5700, Kinetix 6500 & PowerFlex 755 using EtherNet/IP
- Studio 5000 Logix Designer common integrated motion programming, configuration, commissioning and drive diagnostic & maintenance tools



ArmorBlock Guard I/O



PointGuard Distributed I/O (with Standard & Safety)



PointGuard Distributed I/O Module Capacity

- Easy Retrofit Add to existing panels using POINT I/O
- TÜV certified- For use in safety applications up to SIL3, PLe and CAT 4
- CIP Safety over EtherNet/IP or DeviceNet
- Safety and automation control in one I/O solution

PowerFlex 755 Performance

- Automatic Device Configuration (ADC) allows Logix controllers to detect a replaced drive and down load all configuration parameters automatically
- Predictive diagnostics for increasing the life of cooling fans and relay outputs

PowerFlex 755 Configuration

- Integrated Safe Torque Off (SIL3/PLe/Cat 3) hardwired and networked
- Safe Speed Monitor option (SIL3/PLe/Cat 4) allows to safely monitor and control speed
- The new drive safety instructions will work with PF755 v14.
- Configuration and programming via integral LCD Human Interface Module (HIM), DriveTools SP software, or Connected Components Workbench software

PowerFlex 755 Capacity

- 200...240V: 0.37...132 kW / 0.5...200 Hp / 2.2...477 A
- 690V: 7.5...1500 kW / 12...1485 A
- Dual-port EtherNet/IP Option Module allows to leverage EtherNet/IP networks, reduce cabling needs with DLR networks

ArmorBlock Guard I/O Module Capacity

- Provides PLd-rated, single channel safety inputs and PLe-rated, dual channel, safety inputs; safety outputs rated up to PLe
- Available in bipolar and sourcing safety output configurations
- Includes dual Ethernet ports for Linear and Device Level Ring topologies

GuardLogix 5580 Performance

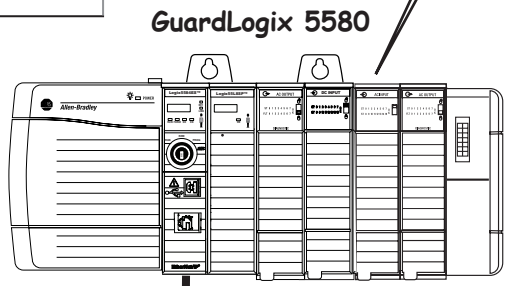
- High performance CPU optimized for faster safety reaction time
- Scalable Safety Level
 - SIL CL2, Up to PLd - Primary Controller
 - SIL CL3, Up to PLe - Primary Controller + Safety Partner
- Increased safety integration and enhanced security features

GuardLogix 5580 Configuration

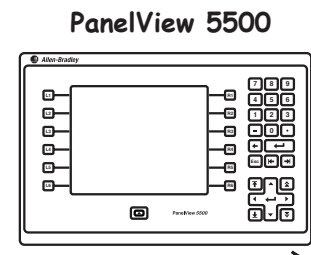
- Scalable Safety up to PLd or up to PLe with safety partner
- Conformal coat versions
- Removal insertion under power

GuardLogix 5580 Capacity

- Integrated Motion on EtherNet/IP™ up to 256 axes
- 1 gigabit (Gb) embedded Ethernet port enables high-speed I/O and motion control for up to 250 nodes
- Safety memory 1.5 - 6.0 MB



1 Gb



100 Mb

Panelview™ 5500 Performance

- ARM 1.0 GHz or X86 1.66 GHz CPU
- 4, 6, 7, 9, 10, 12, 15 and 19 inch Display Sizes
- Color Keypad/Touch Screen Options

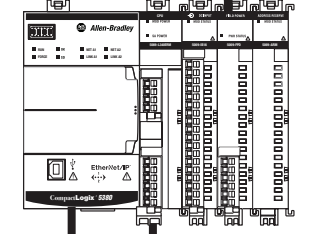
Panelview™ 5500 Configuration

- Premier Integration with Logix Controllers
- Logix Tag Reuse, Global Objects, Faceplates and AOIs
- Single Development Environment

Panelview™ 5500 Capacity

- 512 MB - 1 Gb Memory
- Hot Swappable Secure Digital (SD) card slot
- 2-3 USB ports for external devices, programming
- Windows CE 6.0 operating system

Compact 5000 I/O



E-Stop

Light Curtain

Bill of Material

Qty	Catalog #	Description
System: Controller Hardware		
1	1756-L84E5	GUARDLOGIX 5580 PROCESSOR WITH 20 MB STANDARD MEMORY, 6 MB SAFETY MEMORY
1	1756-A7	7-SLOT CONTROLLOGIX CHASSIS
1	1756-PA50	85-265 VAC SLIM POWER SUPPLY (8A @ 5V DC)
System: Communication Hardware		
1	1783-HMS8T4CGN	STRATIX 5400 SWITCH 8FE, 4GE PORTS
1	1756-EN2T(R)	1 or 2-PORT CLX HI-CAP ETHERNET/IP
Motion Hardware		
1	2198-P031	KINETIX 5700 DC BUS SUPPLY 10A
2	2198-D006-ERS4	KINETIX 5700, 2x2.5A DUAL AXIS INVERTER ADVANCED SAFETY(ETHERNET)
2	VPL-A1002A-CJ12AS	KINETIX VP LOW INERTIA MOTOR, IEC 100mm FRAME SIZE, 1500 RPM RATED SPEED
Single-Cable Technology - One cable between VPL Motor and Kinetix 5700 drive yields simplification and reduces costs. One cable for feedback, motor brake, and motor power.		
1	2090-CSBM1DE-14AA01	SINGLE CABLE FOR KINETIX 5700, 1 METER
<i>Note: Catalog numbers consist of characters, each of which identifies a specific version or option for that component. Reference Publication GMC-SG001-EN-E Kinetix Motion Control Selection Guide for additional information</i>		
Drive Hardware		
1	20G11BC1KOANONNNNN	POWERFLEX 755 AC DRIVE, 200 HP FRAME
1	20-750-S3	POWERFLEX 755 INTEGRATED SAFETY - SAFE TORQUE OFF OPTION MODULE

Note: PowerFlex drives come in many variations - before ordering, you will need to identify voltage rating, horsepower, enclosure type. Please refer to the PowerFlex Selection Guide (PFLEX-SG002-EN-P) for additional details on selecting the right drive for you application.

Distributed I/O Hardware - Compact 5000 I/O		
1	5069-AENTR	ETHERNET/IP ADAPTER
1	5069-IB8S	8 POINT 24 VDC INPUT SAFETY MODULE
1	5069-OBV8S	8 POINT 24VDC SOURCING/BIPOLAR OUTPUT SAFETY MODULE
Distributed I/O Hardware - POINT GUARD I/O		
1	1734-AENTR	1734 DUAL PORT ETHERNET IP ADAPTER
1	1734-IB8S	24V DC 8 POINT INPUT SAFETY MODULE
1	1734-OB8S	24V DC 8 POINT SOURCING OUTPUT SAFETY MODULE
4	1734-TB	MODULE BASE W/REMOVABLE IEC SCREW TERMINALS
1	1794-PS13	85-264V AC TO 24V DC 1.3A POWER SUPPLY

Distributed I/O Hardware - OTHER		
1	1732ES-IB16	24V DC 16 INPUT/ETHERNET/IP SAFETY

HMI Hardware		
1	2715-B10CD	PANELVIEW PLUS 5500 10" COLOR TOUCH TERMINAL, ETHERNET

Recommended Software		
1	9324-RLD300ENE	STUDIO 5000 LOGIX DESIGNER V 31 STANDARD EDITION

Note: ControlLogix Controllers can also be programmed when using Studio 5000 Logix Designer Standard, Full, or Pro.

Compact 5000 I/O

- A new generation of Compact I/O
- High performance control in a compact design
- Scan time improvements as much as 10x
- Mixture of Standard and Safety I/O available

PanelView 5500

- Reuse tags from Logix controllers by choosing them from a list
- 4" - 15" screen sizes available
- Touchscreen, keypad or combination
- Integrated EtherNet/IP, add-on communications for many other networks
- Advanced Operator Interface features such as trending, expressions, data logging, animation.

PowerFlex Drives

- Serves applications ranging from 0.2 kW (0.25 hp) to 6,770 kW (9,000 hp).
- Common set of networks, operator interface and programming for all PowerFlex drives
- Communication Options - Ethernet/IP, ControlNet, Devicenet, DH Plus, RIO, 3rd party networks
- Hundreds of pieces of status and diagnostic information are shared with Logix controllers directly

Kinetix Servos

- Scalable solution for applications from 100W to 112KW
- Integrated platform to simplify machine design and commissioning
- Smart Motor Technology to provide automatic identification of correct motor-to-drive connectivity

POINT Guard I/O

- Fits into the standard POINT I/O™ system
- Communicates by using the CIP™ Safety protocol over EtherNet/IP™ for GuardLogix™ controllers
- For EtherNet/IP connectivity, use a POINT I/O EtherNet/IP adapter (1734-AENT, 1734-AENTR)
- 1734 POINT Guard I/O™ system, Supports 24V DC I/O circuits and Includes analog input circuits

ArmorBlock Guard I/O

- Used only with GuardLogix®, Compact GuardLogix, and Armor™ GuardLogix, configurable with a module-specific profile in Studio 5000 Logix Designer® software
- Provides PLd-rated, single channel safety inputs and PLe-rated, dual channel, safety inputs; safety outputs rated up to PLe
- Available in bipolar and sourcing safety output configurations
- Includes dual Ethernet ports for Linear and Device Level Ring topologies

Stratix Switches and Network Infrastructure

- Stratix 5400, 5700, 8000 and 8300 Managed switches offer Loop Prevention, Security Services, Diagnostic Information, Segmentation Services(VLANs), Prioritization Services(QoS), and Multicast Management Services.
- Stratix 2000 Unmanaged Switches offer no layer 2 or layer 3 management functionality, but offer lower cost.
- Consider Network Address Translation (NAT), available with the 9300-ENA NAT device and the Stratix 5400/5700 with NAT option, depending on your application requirements.

For More Information and Help

For more information contact your local distributor or Rockwell Automation sales representative.

- www.ab.com (Product Directory, Publication Library, Technical Support)

About this Configuration

GuardLogix 5580 Safety controller is first in scalable Safety Performance Levels (PLs) and Safety Integrity Levels (SILs) for machine safety. The risk assessment is the key to defining the safety requirements. The controller has Integrated safety and offers reduced system complexity and hardware cost savings. GuardLogix 5580 will also support existing safety I/O, new Compact 5000 safety I/O and distributed I/O. The combination of the high performance controller and the new high performance I/O, faster screw to screw times will allow for faster safety reaction times

About the Products

Logix Controllers

- A common set of controls, networks, and programming software available in multiple hardware platforms
- Multiple control disciplines in a single controller - sequential / motion / drives / process
- Multiple Program Languages available in all controllers - Ladder Diagram, Function Block, Structured Text, and Sequential Function Chart
- For GuardLogix controller, only ladder diagram is available for 'safety task'
- Tag-based architecture instead of addresses native in the controller

**Rockwell
Automation**

Compact 5000 I/O Performance

- 1 Gb Dual Port EtherNet/IP Connectivity
- With GuardLogix controller, under 1ms screw to screw performance

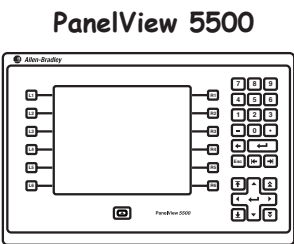
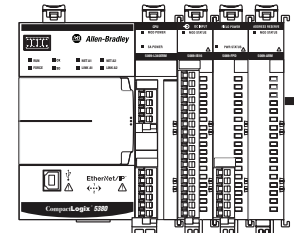
Compact 5000 I/O Configuration

- Supports Module Discovery and Add I/O Online up to SIL3/PLe safety rating

Compact 5000 I/O Capacity

- 31 I/O Modules in a single rack

Compact 5000 I/O (with Standard & Safety)



Panelview™ 5500 Performance

- ARM 1.0 GHz or X86 1.66 GHz CPU
- 4, 6, 7, 9, 10, 12, 15 and 19 inch Display Sizes
- Color Keypad/Touch Screen Options

Panelview™ 5500 Configuration

- Premier Integration with Logix Controllers
- Logix Tag Reuse, Global Objects, Faceplates and AOIs
- Single Development Environment

Panelview™ 5500 Capacity

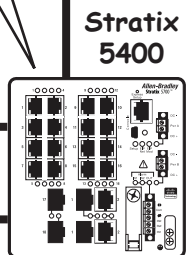
- 512 MB - 1 Gb Memory
- Hot Swappable Secure Digital (SD) card slot
- 2-3 USB ports for external devices, programming
- Windows CE 6.0 operating system

Catalog Number	Standard Memory Size	Safety Memory Size	Total # of Controller EtherNet/IP nodes*
1756-L81ES(K)	3 MB	1.5 MB	100
1756-L82ES(K)	5 MB	3 MB	175
1756-L83ES(K)	10 MB	5 MB	250
1756-L84ES(K)	20 MB	6 MB	250

* Total includes nodes connected using 1756-ENxT modules

Stratix Switch Family

- Scale your switch selection to your application with these Rockwell Automation switches with 1 Gb port capability: - Stratix 8300, 8000, 5700 and 5400 switches
- When connecting machines to a high level plant network, consider IT networking best practices.

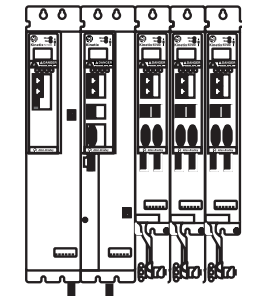


Kinetix 5700 Performance

- High speed registration input on Kinetix drive can trigger a motion task in Studio 5000 Logix Designer for faster event task performance

Kinetix 5700 Configuration

- Network or Hardware Safety - Safe Torque Off - SIL3/PLe/Cat 3
- ERS4 drives have safe motion capabilities using network drive safety instructions in GuardLogix 5580/Compact GuardLogix 5380 controllers".
- Full integrated motion support for Kinetix 350, Kinetix 5500, Kinetix 5700, Kinetix 6500 & PowerFlex 755 using EtherNet/IP
- Studio 5000 Logix Designer common integrated motion programming, configuration, commissioning and drive diagnostic & maintenance tools

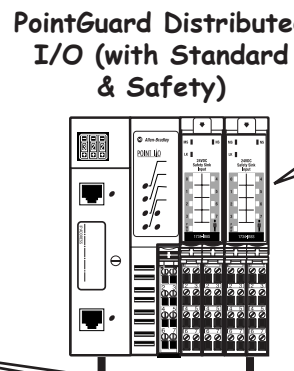
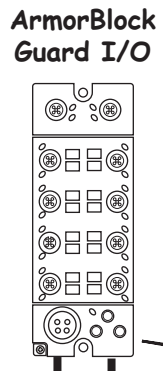
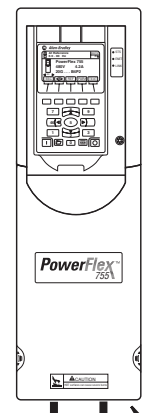


PowerFlex 755 Performance

- Automatic Device Configuration (ADC) allows Logix controllers to detect a replaced drive and download all configuration parameters automatically
- Predictive diagnostics for increasing the life of cooling fans and relay outputs

PowerFlex 755 Configuration

- Integrated Safe Torque Off (SIL3/PLe/Cat 3) hardwired and networked
- Safe Speed Monitor option (SIL3/PLe/Cat 4) allows to safely monitor and control speed
- The new drive safety instructions will work with PF755 v14.
- Configuration and programming via integral LCD Human Interface Module (HIM), DriveTools SP software, or Connected Components Workbench software



PointGuard Distributed I/O Module Capacity

- Easy Retrofit Add to existing panels using POINT I/O
- TÜV certified- For use in safety applications up to SIL3, PLe and CAT 4
- CIP Safety over EtherNet/IP or DeviceNet
- Safety and automation control in one I/O solution

ArmorBlock Guard I/O Module Capacity

- Provides PLD-rated, single channel safety inputs and PLe-rated, dual channel, safety inputs; safety outputs rated up to PLe
- Available in bipolar and sourcing safety output configurations
- Includes dual Ethernet ports for Linear and Device Level Ring topologies

GuardLogix 5580 Performance

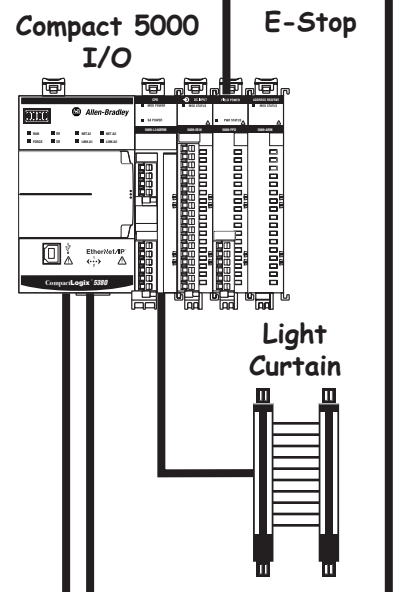
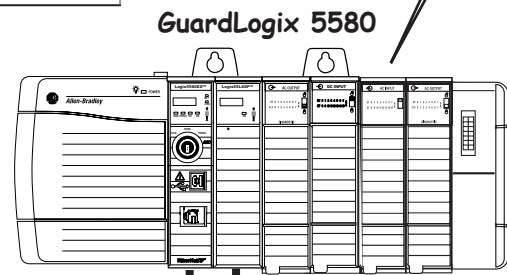
- High performance CPU optimized for faster safety reaction time
- Scalable Safety Level
 - SIL CL2, Up to PLd - Primary Controller
 - SIL CL3, Up to PLe - Primary Controller + Safety Partner
- Increased safety integration and enhanced security features

GuardLogix 5580 Configuration

- Scalable Safety up to PLd or up to PLe with safety partner
- Conformal coat versions
- Removal insertion under power

GuardLogix 5580 Capacity

- Integrated Motion on EtherNet/IP™ up to 256 axes
- 1 gigabit (Gb) embedded Ethernet port enables high-speed I/O and motion control for up to 250 nodes
- Safety memory 1.5 - 6.0 MB



Bill of Material

Qty	Catalog #	Description
System: Controller Hardware		
1	1756-L84E5	GUARDLOGIX 5580 PROCESSOR WITH 20 MB STANDARD MEMORY, 6 MB SAFETY MEMORY
1	1756-A7	7-SLOT CONTROLLOGIX CHASSIS
1	1756-PA50	85-265 VAC SLIM POWER SUPPLY (8A @ 5V DC)
System: Communication Hardware		
1	1783-HMS8T4CGN	STRATIX 5400 SWITCH 8FE, 4GE PORTS
1	1756-EN2T(R)	1 or 2-PORT CLX HI-CAP ETHERNET/IP
Motion Hardware		
1	2198-P031	KINETIX 5700 DC BUS SUPPLY 10A
2	2198-D006-ERS4	KINETIX 5700, 2x2.5A DUAL AXIS INVERTER ADVANCED SAFETY(ETHERNET)
2	VPL-A1002A-CJ12A5	KINETIX VP LOW INERTIA MOTOR, IEC 100mm FRAME SIZE, 1500 RPM RATED SPEED
Single-Cable Technology - One cable between VPL Motor and Kinetix 5700 drive yields simplification and reduces costs. One cable for feedback, motor brake, and motor power.		
1	2090-CSBM1DE-14AA01	SINGLE CABLE FOR KINETIX 5700, 1 METER
Note: Catalog numbers consist of characters, each of which identifies a specific version or option for that component. Reference Publication GMC-SG001-EN-E Kinetix Motion Control Selection Guide for additional information		
Drive Hardware		
1	20G11BC1KOANONNNNN	POWERFLEX 755 AC DRIVE, 200 HP FRAME
1	20-750-S3	POWERFLEX 755 INTEGRATED SAFETY - SAFE TORQUE OFF OPTION MODULE

Note: PowerFlex drives come in many variations - before ordering, you will need to identify voltage rating, horsepower, enclosure type. Please refer to the PowerFlex Selection Guide (PFLEX-SG002-EN-P) for additional details on selecting the right drive for you application.

Distributed I/O Hardware - Compact 5000 I/O		
1	5069-AENTR	ETHERNET/IP ADAPTER
1	5069-IB8S	8 POINT 24 VDC INPUT SAFETY MODULE
1	5069-OBV8S	8 POINT 24VDC SOURCING/BIPOLAR OUTPUT SAFETY MODULE
Distributed I/O Hardware - POINT GUARD I/O		
1	1734-AENTR	1734 DUAL PORT ETHERNET IP ADAPTER
1	1734-IB8S	24V DC 8 POINT INPUT SAFETY MODULE
1	1734-OB8S	24V DC 8 POINT SOURCING OUTPUT SAFETY MODULE
4	1734-TB	MODULE BASE W/REMOVABLE IEC SCREW TERMINALS
1	1794-PS13	85-264V AC TO 24V DC 1.3A POWER SUPPLY

Distributed I/O Hardware - OTHER		
1	1732ES-IB16	24V DC 16 INPUT/ETHERNET/IP SAFETY

HMI Hardware		
1	2715-B10CD	PANELVIEW PLUS 5500 10" COLOR TOUCH TERMINAL, ETHERNET

Recommended Software		
1	9324-RLD300ENE	STUDIO 5000 LOGIX DESIGNER V 31 STANDARD EDITION

Note: ControlLogix Controllers can also be programmed when using Studio 5000 Logix Designer Standard, Full, or Pro.

Compact 5000 I/O

- A new generation of Compact I/O
- High performance control in a compact design
- Scan time improvements as much as 10x
- Mixture of Standard and Safety I/O available

PanelView 5500

- Reuse tags from Logix controllers by choosing them from a list
- 4" - 15" screen sizes available
- Touchscreen, keypad or combination
- Integrated EtherNet/IP, add-on communications for many other networks
- Advanced Operator Interface features such as trending, expressions, data logging, animation.

PowerFlex Drives

- Serves applications ranging from 0.2 kW (0.25 hp) to 6,770 kW (9,000 hp).
- Common set of networks, operator interface and programming for all PowerFlex drives
- Communication Options - Ethernet/IP, ControlNet, Devicenet, DH Plus, RIO, 3rd party networks
- Hundreds of pieces of status and diagnostic information are shared with Logix controllers directly

Kinetix Servos

- Scalable solution for applications from 100W to 112KW
- Integrated platform to simplify machine design and commissioning
- Smart Motor Technology to provide automatic identification of correct motor-to-drive connectivity

POINT Guard I/O

- Fits into the standard POINT I/O™ system
- Communicates by using the CIP™ Safety protocol over EtherNet/IP™ for GuardLogix™ controllers
- For EtherNet/IP connectivity, use a POINT I/O EtherNet/IP adapter (1734-AENT, 1734-AENTR)
- 1734 POINT Guard I/O™ system, Supports 24V DC I/O circuits and Includes analog input circuits

ArmorBlock Guard I/O

- Used only with GuardLogix®, Compact GuardLogix, and Armor™ GuardLogix, configurable with a module-specific profile in Studio 5000 Logix Designer® software
- Provides PLd-rated, single channel safety inputs and PLe-rated, dual channel, safety inputs; safety outputs rated up to PLe
- Available in bipolar and sourcing safety output configurations
- Includes dual Ethernet ports for Linear and Device Level Ring topologies

Stratix Switches and Network Infrastructure

- Stratix 5400, 5700, 8000 and 8300 Managed switches offer Loop Prevention, Security Services, Diagnostic Information, Segmentation Services(VLANs), Prioritization Services(QoS), and Multicast Management Services.
- Stratix 2000 Unmanaged Switches offer no layer 2 or layer 3 management functionality, but offer lower cost.
- Consider Network Address Translation (NAT), available with the 9300-ENA NAT device and the Stratix 5400/5700 with NAT option, depending on your application requirements.

For More Information and Help

For more information contact your local distributor or Rockwell Automation sales representative.
 • www.ab.com (Product Directory, Publication Library, Technical Support)

About this Configuration

GuardLogix 5580 Safety controller is first in scalable Safety Performance Levels (PLs) and Safety Integrity Levels (SILs) for machine safety. The risk assessment is the key to defining the safety requirements. The controller has Integrated safety and offers reduced system complexity and hardware cost savings. GuardLogix 5580 will also support existing safety I/O, new Compact 5000 safety I/O and distributed I/O. The combination of the high performance controller and the new high performance I/O, faster screw to screw times will allow for faster safety reaction times

About the Products

Logix Controllers

- A common set of controls, networks, and programming software available in multiple hardware platforms
- Multiple control disciplines in a single controller - sequential / motion / drives / process
- Multiple Program Languages available in all controllers - Ladder Diagram, Function Block, Structured Text, and Sequential Function Chart
- For GuardLogix controller, only ladder diagram is available for 'safety task'
- Tag-based architecture instead of addresses native in the controller